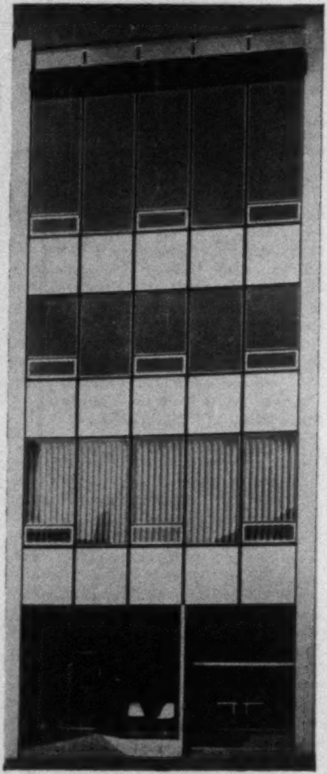
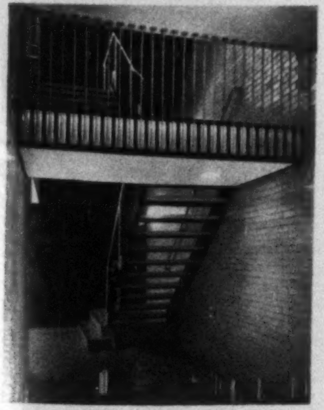
MARGINALIA

Local Fifty-four

The social and welfare centre for Building Service Employees' Local 54, New York City, is remarkable not only for its skilful and elegant application of curtain wall aesthetics to a facade of domestic scale, 1, but also for its architect, Giorgio Cavalieri, a Venetian now settled in the USA who has insisted on running a practice of the European type, rather than involve himself with the organizational giantism which grips so much US architectural design. The resultant combination of craftsmanly attention to individual details with high technical finish is as apparent in much of the interior, 2, as it is externally, and the reader will probably experience no surprise in learning that Cavalieri also designed an Olivetti showroom, in San Francisco, and was awarded the Architectural League gold medal for it.



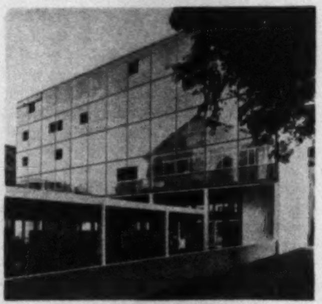
1, *Building Service Employees Local* 54.



staircase of Local 54.

There and Not There

In his classic *Glas im Bau*, published in the late 'Twenties, Arthur Korn observed that the truly unique quality of glass as a walling material was: Es ist da, und es ist nicht da—and proceeded to interpret this ambiguity in a number of different ways. In the age of patent glazing we have become accustomed to this state of affairs in the realm of practical experience, but it has rarely reached such explicit demonstration in the eye of our accepted arbiter of aesthetics, the camera, as in this view of the rear façade of Hans Fischli's new building, 3, for the Basle Furniture Co-operative. The glass wall, though visible, is almost completely devalued as a visual entity, it is transparent only where it reflects solid objects, and the holes punched in it by opened windows appear more 'real' than the substance of the glass itself. It emphasizes that in spite of the sophisticated and perceptive observations made on glass by its early protagonists, it is still a material that we use in almost complete ignorance of its visual character.

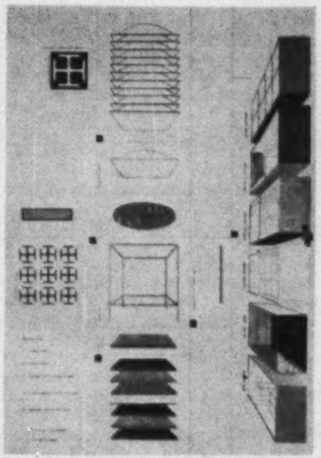


3, *rear of the Basle Furniture Co-operative.*

Once More the Industrialized House

For over two years now a research group in the well-known US design office of George Nelson & Company has been re-investigating that favourite theme of *avant-garde* American designers, the industrialized house. The 'rules' governing their approach were tough, and disfigured in places by short-reach thinking—as in an embargo on natural materials ('The problem is design for production, not romance') as if anyone standing downstream of Buckminster Fuller in the mainstream of progressive US architecture could be unromantic about synthetic materials. Nevertheless, the results have been promising, and as elegant as anything else from the Nelson office, without producing any strikingly new solutions.

The basic element of the design is a 12 ft. by 12 ft. by 12 ft. cube formed of lengths of a complex aluminium extrusion, and a number of optional floor and wall panels, roof covers and service packages, the whole presented as a catalogue, 4, rather than as a specification, somewhat after the manner of the design of the Eames house (AR, Marginalia, May, 1957). These cubes and their interspersed service packages are then fitted together on a fairly scattered plan—echoes here, 5, of Bruce Goff's 1952 cube-house in Florida (also AR, May, 1957)—chiefly for the sake of obtaining a higher degree of sound insulation than is possible with continuous light-weight structure. This additive, patio planning probably receives its greatest justification, however, from its clear sympathy with the kind of interiors generated by this catalogue-option approach, all under translucent domes carried above strips of ventilating grille-work, 6, these last two devices stemming from the proposition (an arguable one) that the functions of lighting, ventilating, and providing views are too diverse to be served by the old-fashioned window alone.



4, *catalogue presentation of house components designed by George Nelson and Co.*

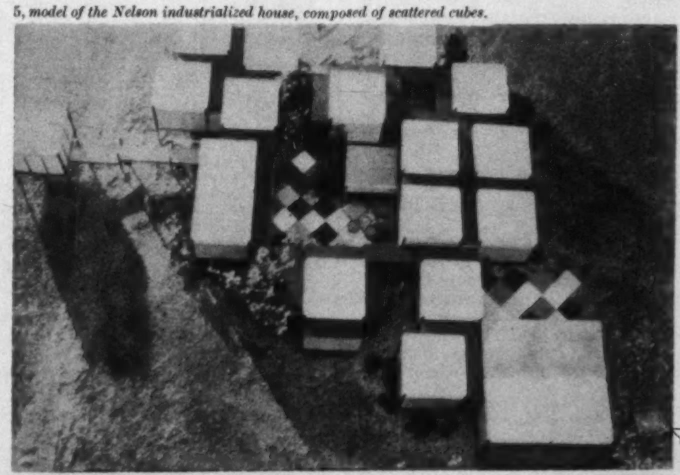
District Heating in Munich

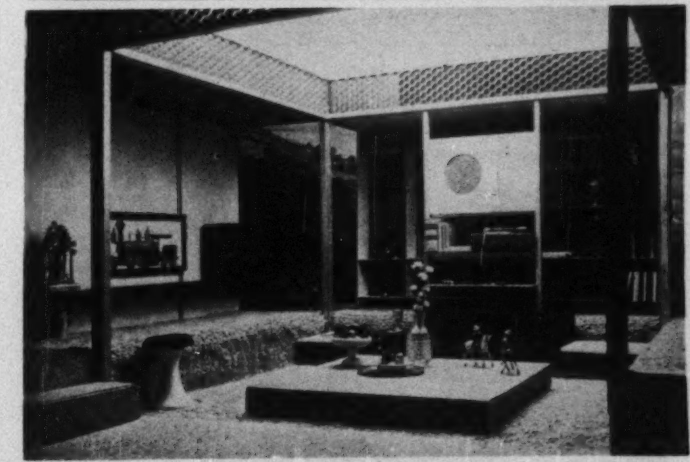
English discussions of the siting of power-stations tend to proceed on the assumption that all industrial plant is inherently evil, and ought to be banished from human ken. Germans appear to think otherwise, and a new plant for power and district heating in Munich, designed by the engineer Karl Hencky and a team of architects, has been deliberately located in a densely built-up urban area, towering conspicuously, 7, above the surrounding buildings. The philosophy of this decision is perfectly straightforward and humane: it is cheaper, and more efficient, to transport coal in trucks than it is to distribute heat through over-long insulated pipe-runs, and it is practicable to filter the smoke from a single large plant, but not from a host of domestic chimneys—a centrally located plant thus helps toward a cleaner city.

The filter-plant dominates the design of the building envelope and, as the section shows, 8, occupies the bulk of the tower-block, the cleaned effluent emerging through short chimney-stacks, and the risk of smoke blowing down being obviated by an 'aerodynamic roof' to

7, *Munich power plant tower.*

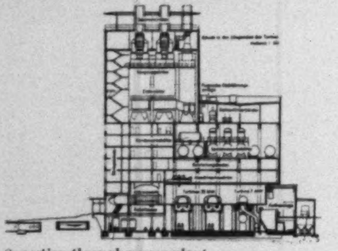
5, *model of the Nelson industrialized house, composed of scattered cubes.*





6, *interior, showing ventilating grille below the dome.*

straighten airflow over the top of the tower. The external treatment of this upstanding block suffers no false modesty and makes no attempt to 'keep in keeping' with the Biedermeyer and Biedermeyer-revival buildings around it—the tower is of partly-glazed curtain-walling, the boiler and turbine house is of exposed r.c. frame construction with infill of tiling. Nevertheless it has a properly urban character and is as important a contribution to power-station aesthetics as Hans Hoffmann's carefully landscaped hydro-electric plant at Birsfelden, illustrated in AR, July, 1957.



8, section through power plant.

Wiener Stadthalle

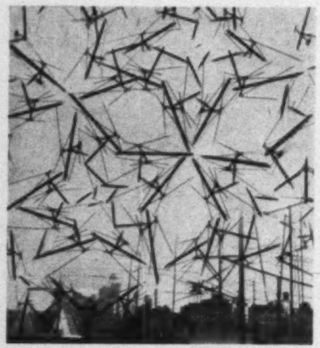
The closed competition in 1952 for a municipal sports stadium for Vienna was so clogged with leading talents that the first prize had to be split and even Nervi's project received only an honourable mention (but was illustrated in AR, August, 1955). The divided first prize went to Alvar Aalto, for a design with particularly brilliant tent-like section, 9, and to Roland Rainer for what is now, but was not then, a more conventional solution, 10. All things else being equal, the fact that Herr Rainer is Viennese gave him a margin over even the great Aalto, and it is his design that is now nearing completion, 11—two gigantic ramps of tiered seats, in concrete, flanking an independent gantry structure carrying the roof and services over the playing area, and all wrapped in a vast skin of metal cladding that effectively conceals the differentiation of the parts within.

New Work at Trinity

After a considerable period of obscurity and doubt, some information has at last been released about the rebuilding plans of Trinity College, Cambridge. The 1954 scheme by Powell and Moya, though approved by a small majority at a College meeting, has been abandoned in the face of energetic lobbying by a section of the Fellows, and a new scheme, approved by an unstated majority, and with the backing of the Fellows' lobby, has been substituted, to the designs of J. S. L. Smith, of Husband and Company, an 'umbrella practice' of engineers, surveyors and architects from Sheffield. The new scheme provides for rebuilding behind the existing façades of property in Trinity Street, and will be virtually invisible from outside the College, while toward the inside it will present elevations whose appearance may be judged from references to a bow window, a coat of arms, low ratio of window to wall, and a non-bearing brick cladding disguising both the structure and the functional layout behind. A sketch of this scheme was published, with a statement by the Senior Bursar, from which the above information was extracted in the *Trinity Review*, Lent, 1958, p. 22.

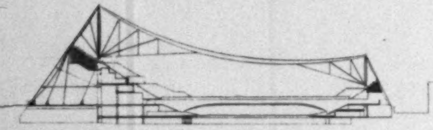
Weegee's Aerial Space-frame

The possibilities of manipulated photography have been discussed in AR before now (e.g. stressed negatives by Nigel Henderson, Feb., 1952) but their use as a technique of visual criticism seems to have been left to the US photographer Arthur Fellig, better known for his combination of stressed prints with kaleidoscopic lenses to produce humorous caricatures under the *nom-d'objectif* of Weegee. Recently, the use of the pattern-making potentialities of his technique has been adapted for printed textiles, and among material reproduced in *Interiors* when this development was announced was a Weegee prospect of urban television-scape, 12, that seems to carry with it a back-handed compliment to the geodesic space-frames of Buckminster Fuller.



12, kaleidoscope lens image by Weegee.

9



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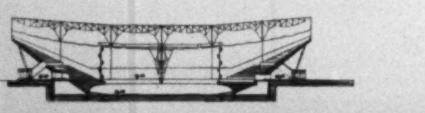
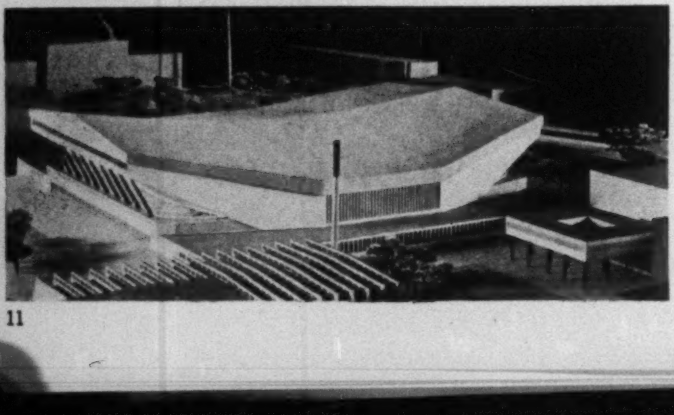


WIENER STADTHALLE

9, section through Alvar Aalto's design. 10, section through Roland Rainer's design. 11, model of the Rainer design which is now nearing completion.



11

The Hampstead Society

Among the most active of the associations to protect the visual amenities of particular localities is the recently formed one that has taken guard over the 'intellectual belt' of NW3—The Hampstead Society. The original stimulus came from the controversy over Hampstead Civic Centre, in which, as an *ad hoc* pressure group, they lobbied successfully for a contemporary design. After this, at their inaugural meeting as a regularly constituted society, Dr. Pevsner directed the audience of a hundred not to forget the rest of the borough for the sake of the 10 per cent that forms 'the village.' Since the society had already decided to consider all aspects of the visual environment together, this left them with an enormous field in which to campaign, but, for the present, they are concentrating their activities on two main projects—a detailed case-study of Flask Walk (Council neo-Georgian one side, spec-builder on the other) and an over-all development plan in the hope of influencing the Council and the LCC—though they are, of course, fully engaged in the inevitable skirmishes over lamp-standards, lopped trees, etc. Those interested in the work of the society, should write to the secretary, Christopher Gotch, 30 Greenhill, Hampstead, NW3.

CORRESPONDENCE

Plate Glass Shop Front

To the Editors,

Sirs,—Miss Mary Eldridge traces the history of 'The Plate-Glass Shop Front' (AR, March, 1958) back to a book of designs published in 1828. May I draw attention to the earlier pioneer work of J. B. Papworth?

The details are set out by Wyatt Papworth in a biography of his father: *John B. Papworth, Architect to the King of Wurtemburg*, privately printed at London in 1879. Round about 1822–23, he wrote, 'the shopkeepers of London were improving their Fronts for the better exhibition of Goods, discarding the small squares of "best Newcastle Crown Glass" for the larger dimensions afforded by Plate glass, expensive though it then was, in consequence of the high duty upon it. The introduction of the new invention "Gas" also enabled a larger display to be effected. Many opportunities were afforded Mr. Papworth to show his skill in this line of architectural design, which has been thought beneath the consideration of the man of taste, and such works not fitted to be allied with his name. . . . In London, few, if any, men of note had as yet attempted much improvement on the old-fashioned shop-front. Mr. Papworth's designs, humble as they may now appear to be to us who are accustomed to the large decorative display of the modern shop-front, were in his day greatly admired, and helped to create a taste for better architecture in this class of building.'

His earliest work of this kind seems to have been 'designs of a novel character for shop-fronts' at the premises of Collinge's, engineers, in Westminster Bridge Road. In 1822–23 'he designed a far larger front' for F. & R. Sparrow, tea-merchants, at 8 Ludgate Hill; 'the whole front of the house was decorated after the Chinese manner, including all the openings and the shop-front.' The next commission, for Turner & Clarkson, 17 Coventry Street, excited much attention; other designs were made for 29 and 117 Piccadilly; while the shop-front of Messrs. Duppa, house decorators, of 314a Oxford Street, 'had so picturesque an effect, and exhibited so much novelty of design, that, as I have been assured, it proved an attraction to the profession as well as to the public.'

Papworth's skill in combining the effects of gas-lighting with novel designs in glass led to another notable pioneer work: the rebuilding of Thompson & Fearon's gin-shop at 94 Holborn Hill, 1829–32. 'This façade,' remarks the biographer, 'was long considered a feature of art in that formerly inartistic and undesirable locality.' It was, he states firmly, 'the earliest of the gin-palaces.' H. McG. Dunnett (*Inside the Pub*, AR, Oct. 1949) appears to credit the design to Stephen Geary, who specialized in laying out cemeteries. Except that gin-palaces helped to provide more work for the undertaker, there would appear to be no connection.

This gin-palace is a recent casualty of Modern Improvements. As Fearon's, 39 Holborn Viaduct, it was described as 'having stood on its present site for at least 150 years,' by H. E. Popham, *The Taverns in the Town*, 1937. It was last recorded at the same address in Maurice Gorham's *Back to the Local*, 1949. A monster office block now occupies the site.

Yours, etc.,

Brian Spiller.

Westminster, SW1.

House in Highgate

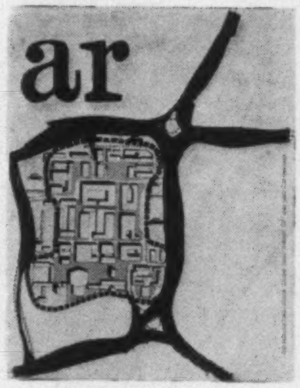
In the article on Mr. Ove Arup's house in the May issue it was not mentioned that all the internal fittings, comprising: Kitchen Table, All kitchen and Utility Room fittings, Kitchen-Dining fitting, Dining-Living fitting, Study-Living fitting, Bathroom fittings and Fittings in Master suite were designed by Stallard and Walker, ARIBA, who also carried out the site supervision, and that the Garden layout was designed by Humphrey Wood, ARIBA.

ACKNOWLEDGMENTS

Art Nouveau Script, pages 369–372: 10–15, Photo Stober. Hubs Without Wheels, pages 373–392: Vallingby, 1–3, 6, 7, 10, 11, G. E. Kidder Smith. Harlow, page 383, top, Galwey Arphot; below, McCann. route a, 1–5, Galwey Arphot. route b, 1–3, Wainwright; 4, 5, Galwey Arphot. route c, 1, Galwey Arphot; 2, Wainwright. route d, 1, 2, Galwey Arphot; 3–5, Wainwright. route e, 1–4, 6, Galwey Arphot; 5, 7, Wainwright. Market Square, 1, 2, Galwey Arphot; 3, 4, McCann. 5–11, Galwey Arphot. Towers of Learning, pages 393–398: frontis, Toomey Arphot; 1, National Buildings Record; 2, 15, 16, The Builder; 4, Bedford Lemere and Co. Ltd. Interior Design, pages 399–404: Caledonian Hotel, 2, Ideal Studio; Shoe Showroom, Priscilla Conran; Studio Flat in Athens, 8–11, Philip Boucas. Westminster Revisited, pages 405–409: Cullen Arphot. Current Architecture, pages 410–416: Offices at Beckton, Galwey Arphot; House at Newstead Abbey, W. E. Middleton and Son; Sailing Club at Beadnell, Galwey Arphot. Miscellany, pages 417–422: Exhibitions, 2, Whitechapel Art Gallery; 3, Marlborough Fine Art Ltd.; 6, E. J. Power collection. Shutters, Blinds and Umbrellas, 3, Photo Anderson; 4, H. Dearstyne; 8, R. P. Way. Counter Attack, Nairn Arphot. The Industry, pages 428–432: 1, 2, Stewart Bale Ltd.; 3, Sam Lambert.

THE ARCHITECTURAL REVIEW

Volume 123 Number 737 June 1958



The Cover, drawn by Ian Hodgson, demonstrates the basic circulation-planning of the Town Centre at Harlow. A ring of motor roads, shown in red, mark the limit beyond which shoppers' cars may not penetrate; the motorist must leave his car in one of the car-parks and, like a man passing through the gates of a walled city, enter a world on a different scale—the pedestrian scale of the inner precinct, shown cross-hatched. An illustrated comparison of Harlow Town Centre and that of its Swedish contemporary, Vällingby, begins on page 373 of this issue.

365 **Marginalia**

368 **Frontispiece**

369 **Art Nouveau Script** *by Roswitha Baurmann* As the recent studies of Art Nouveau in the ARCHITECTURAL REVIEW will have suggested, lettering and typography were two arts in which some of its most significant pioneering symptoms appeared, because it was one of the first points at which creative artists made their influence felt on the useful arts. Dr. Baurmann, surveying the subject from its earliest beginnings in McMurdo's Century Guild publications, reveals not only the influence of 'fine' artists, as such—Whistler, Lautrec—but also of handicraft techniques such as woodcuts and brushwork on the letter forms that were evolved, culminating in van de Velde's view of line as translated gesture—a view that sounds very modern but derives, in his case, from a study of another artist who influenced Art Nouveau, Georges Seurat.

373 **Hubs without Wheels** Whatever may be thought of the over-all planning of new towns and satellite suburbs like Harlow, in England, and Vällingby, in Sweden, serious attempts have been made in both these cases to give them lively and effective urban centres. The two hubs—Vällingby built outwards from its railway station, Harlow turned inwards on to its open market—are compared and illustrated here with plans, descriptions and extensive photographic surveys.

393 **Towers of Learning** *by David Gregory Jones* The tall, brick Schools of the late nineteenth century, designed in their immediately recognizable School-Board style, that tower above the smaller buildings of south and east London owe their great height not only to the restricted sites into which they had to be packed, but even more to the determined views of the man who designed most (and the best) of them—E. R. Robson, first architect to the London School Board. Mr. Gregory Jones puts Robson's views in the context of their time, including the views of other designers like Basil Champneys, and shows how they led to the schools being envisaged as landmarks (in every sense of the word) of a secular culture. But they were more than this, and he also examines and describes the remarkably original and workable architectural character of some surviving examples.

399 **Interiors: Chandelier, Caledonian Hotel, Edinburgh:** *Designers, Robert and Roger Nicholson*

401 **Interiors: Shoe Shop in Regent Street, W.1:** *Designers, Conran Contracts*

402 **Interiors: Studio in Athens:** *Designer, N. Hatzikyriakos-Ghika*

405 **Westminster Revisited** *by Gordon Cullen* Most attempts to visualize the precinctual character of what the REVIEW has called *Westminster Regained* are thwarted by the rude gash of Victoria Street, at variance with the earlier street-pattern, aligned on no ancient monument, and bringing the building lines up to a knife-edged angle on that side of the Abbey forecourt that most needs to be treated as an enclosing wall. However, plans for rebuilding nos. 1-19 Victoria Street, offer the possibility of remedying this planning solecism, and Mr. Cullen shows how a deflection of the street-line and a re-grouping of buildings (due for replacement anyhow) could achieve a major improvement.

410 **Current Architecture**

Miscellany

417 **Books**

418 **Exhibitions**

420 **History**

422 **Counter Attack**

Skill

424 **The Geometry of Shade** *by Michael Brawne* Howard Dearstyne's note in *Miscellany* (page 420) records what was done to control the sun in history, Mr. Brawne here explains what can be done to control the sun with geometry. Apart from any mechanical aids at the architect's disposal, a great deal can be done by means of simple mathematics and geometrical diagrams to build a high degree of sun-control into the very plan and section of a building, and this article gives examples of these techniques in use.

428 **The Industry**

432 **Contractors**

Authors: *Dr. Roswitha Baurmann* was born in Karlsruhe on March 26, 1926. Her father was a Russian prisoner of war. Until 1948 she was an apprentice photographer in her father's blockmaking firm in Karlsruhe, then she studied art history, history and archaeology in Freiburg and Munich and graduated in 1956 and produced a thesis *Script in Art Nouveau.* She became an assistant in the Institute of Art History at Freiburg University and has recently been working in a voluntary capacity at the Staatlicke Kunsthalle in Karlsruhe. *David Gregory Jones* trained at the A.A. school, qualifying in 1949. Since this date he has been with the LCC Architects Department, at first on schools and, since 1955, on housing. At the moment he is job architect for the group of six 18-storey point blocks going up at the Brandon Estate, Southwark. He was a prize-winner in the Golden Lane Competition—4th prize—and won AA Essay prize in 1954 with a study of the early work inspired by Webb of the LCC Architects Department. He is the editor of *Keystone* and lives with two other architects and their families in Webb's Red House at Bexley Heath.

Directing Editors J. M. Richards, Nikolaus Pevsner, H. de C. Hastings, Hugh Casson

Executive Editor Ian McCallum

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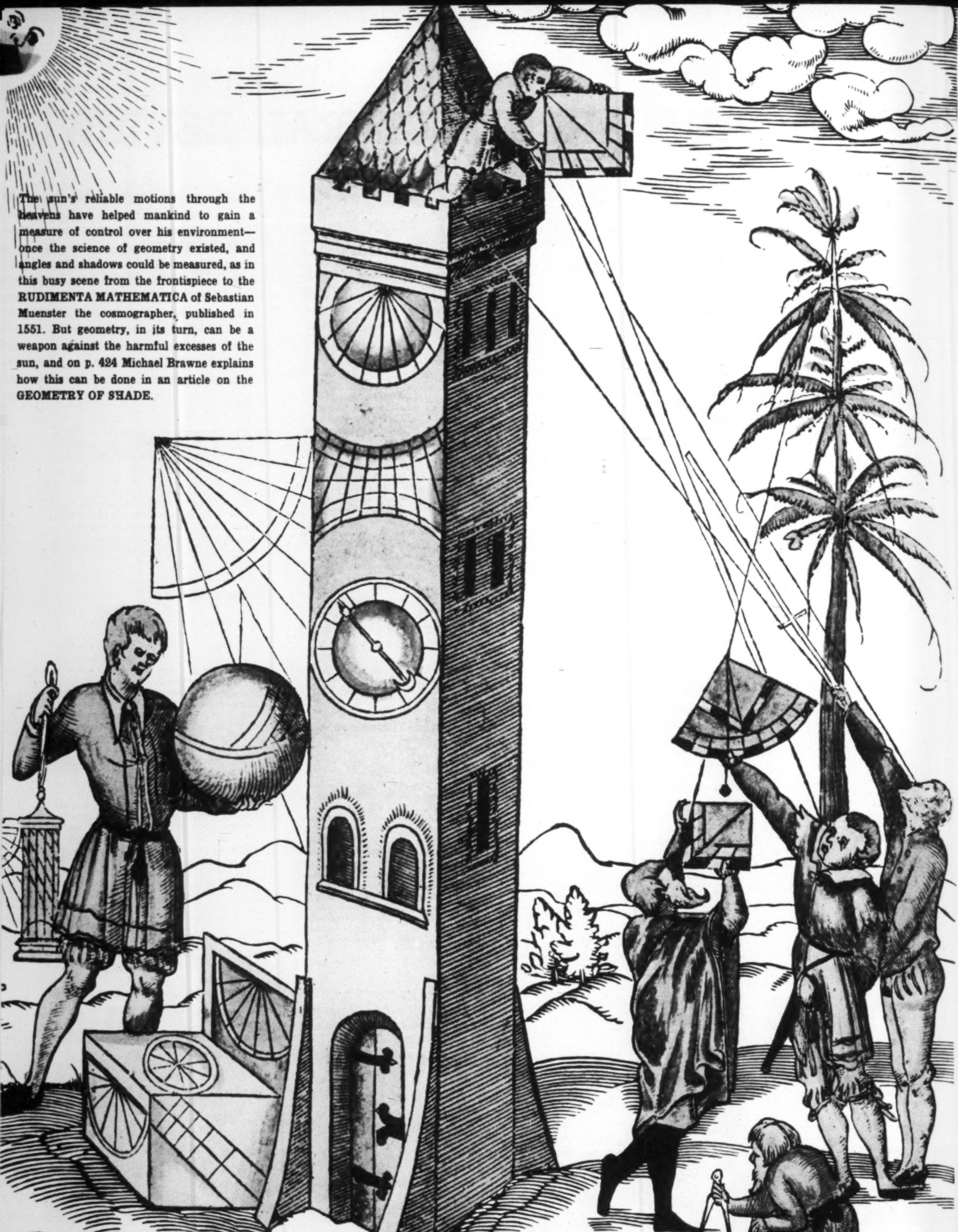
FIVE SHILLINGS



The sun's reliable motions through the heavens have helped mankind to gain a measure of control over his environment—once the science of geometry existed, and angles and shadows could be measured, as in this busy scene from the frontispiece to the **RUDIMENTA MATHEMATICA** of Sebastian Muenster the cosmographer, published in 1551. But geometry, in its turn, can be a weapon against the harmful excesses of the sun, and on p. 424 Michael Brawne explains how this can be done in an article on the **GEOMETRY OF SHADE.**

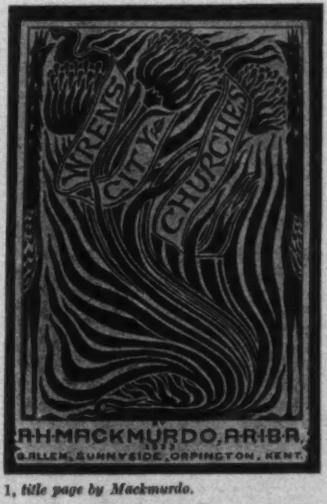
ROSWITHA BAURMANN

ART NOUVEAU SCRIPT

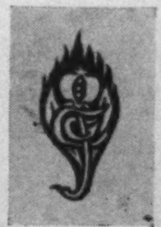
Arthur H. Mackmurdo together with Herbert P. Horne and Selwyn Image founded the Century Guild in 1882. [See N. Pevsner: *Pioneers of Modern Design*, second edition, New York, 1949, and R. Schmutzler, in THE ARCHITECTURAL REVIEW, August, 1955, p. 109, etc.]. Their intention was to revive art in handicraft which had perished under the impact of the machine. In this intention they were at one with William Morris and the Pre-Raphaelites with whom Mackmurdo and Image remained in the friendliest relations for a long time. But whereas Morris as a designer and producer of furnishings and later also of books, confined himself to the restoration of the best standards of work of past centuries, the programme of Mackmurdo and the Century Guild went far beyond this. In the field of graphic production in particular, Morris's achievement was in continuance of old traditions, Mackmurdo arrived at forms so completely new that they must be regarded as the beginning of Art Nouveau.

1884 is the date of the first year of the Century Guild's *Hobby Horse;* Mackmurdo discussed the production with Emery Walker, entrusted the printing to the Chiswick Press, chose Caslon as the type for it and insisted on hand-made paper. [N. Pevsner: THE ARCHITECTURAL REVIEW, vol. 83, 1938.] Aymer Vallance, in 1899, recognized the pioneer role of the Hobby Horse—started six years before Morris's Kelmscott Press—by saying: 'The earliest number, under the date April 1834, was, at the time of its appearance, a work quite unique of its kind. Never before had modern printing been treated as a serious art, whose province was to embrace the whole process, from the selection and spacing of the type . . . to the embellishment of the book with appropriate initials and other decorative ornaments.' [*Studio*, vol. 16, pp. 183, etc.]. In the *Hobby Horse* each number and, of course, each page were treated as a whole. The decoration of the first number consists exclusively of some wood-cut initials by Image and some smaller wood-cuts. Image always tried to achieve unity, but he was rarely quite successful, while Mackmurdo, in the few works of graphic art for which his authorship is certain, proved in style and particularly in lettering an astonishingly mature mastery.

The woodcut on the title-page of his *Wren's City Churches*, 1, of 1883 has been recognized as a milestone by Dr. Pevsner and accepted as such by Mr. Schmutzler. The oblong of the picture is framed by two highly stylized peacocks; at its base are name of author and particulars of publication. At its top there is nothing to close the composition equally firmly. The lettering below is in capitals. The type is drawn grotesque with each letter taking up a more or less square space. The picture itself with its flame-like or octopus-like S-curves is familiar. The original must have been done with a brush. The words Wren's City Churches stand on a kind of scroll. Their type is Roman capitals. But bars taper, contract and expand. Everything seems in motion. The letters are full of life and tension. There is no fixed rule for the appearance of a letter. The C appears three times in different forms, the S twice. The reason may be a conception of perspective or, indeed, the undulating character of the whole scroll. A similar case is the signet of the Century Guild, 2. On a black ground given the shape of a leaf with flaming indentations appears a white poppy on a curved stalk. The letters C and G twine round stalk and leaves. The letters are again broad and their bars expand and contract. Letters and vegetable forms are treated as on the same level of reality against the black ground. This unification of subject matter and lettering appears here for the first time. Artists of Art Nouveau were going to apply it often.

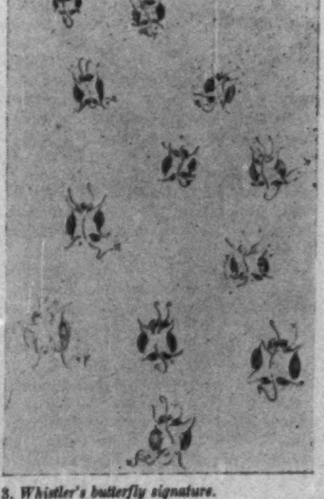

WRENS
CITY
CHURCHES
A.H.MACKMURDO, A.R.I.B.A.
G.ALLEN, SUNNYSIDE, ORPINGTON, KENT.

1, *title page by Mackmurdo.*

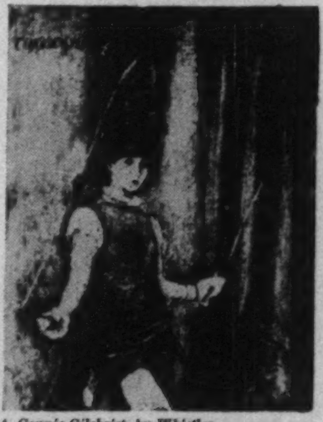


2, *signet of the Century Guild.*

The innovations of Mackmurdo are so radical that one must try to investigate whether he can have acted under the stimulus of the art of any predecessor. In the literature so far on the subject there is only one hint. Dr. Pevsner in his article on Mackmurdo quotes from a letter which Mackmurdo wrote to him: 'When Whistler had his first one-man show, I helped him with the arrangement. He took meticulous care in placing each drawing or each etching in its place. The impression of the gallery upon entering was startling.' [N. Pevsner: *Journal of the Royal Institute of British Architects*, vol. 49, 1942, p. 94.] Now Whistler, with his enthusiasm for Japan and his faith in composition for composition's sake, had indeed something to contribute to the evolution of script as well. Out of his initials JMW which in his early works he used as a signature, he began, in 1863, to evolve the celebrated butterfly in which the individual letters almost lose their identity, 3. [E. R. and J. Pennell: *The Life of J. McN. Whistler*, London, 1908, p. 125.] The butterfly became an important part of Whistler's paintings. Not only its form, but also its colour and its position became significant. Nothing could be more characteristic than the fact that there are unfinished pictures of his in which the butterfly is already complete. The relation of Mackmurdo's CG to these butterflies seems convincing.



3, *Whistler's butterfly signature.*

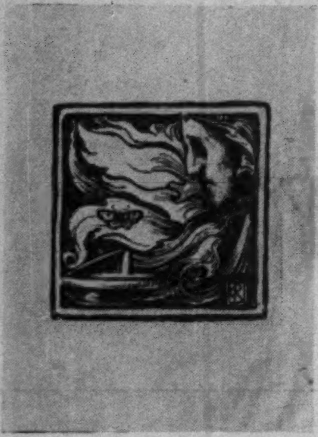


4, *Connie Gilchrist, by Whistler.*

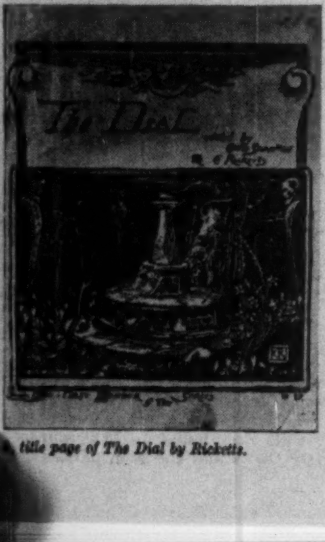
As an example of Whistler's style of lettering the Connie Gilchrist of 1876 may be illustrated, 4. The script is Italic capitals, drawn with the brush as the Chinese and the Japanese did. Here also the technique and the results are similar to Mackmurdo's (see the N and the E in particular).

It is also likely that Mackmurdo was stimulated by Whistler's brush-script to use the brush for his woodcuts. Moreover, Whistler's idea of a composition as a whole instead of a sum of individual parts must have appealed strongly to Mackmurdo.

However, one other artist must have inspired Mackmurdo's attitude to ornament and script as much as Whistler: Blake. Blake's part in the creation of Art Nouveau has been elucidated by Mr. Schmutzler. [ARCHITECTURAL REVIEW, August, 1955.] In the second number of the *Hobby Horse* appeared a facsimile of Blake's *Little Tom the Sailor*. Mackmurdo's comment to it is: 'What a marvellous sample of typewriting is the ballad written with a brush, full of stopping-out varnish on the pewter and while as legible as ordinary types, every letter has a naïve expression, capital letters flaunt capriciously down the page each giving a defiant little kick of its own.' [*Hobby Horse*, 1886, p. 159.]


5, *page from The Dial designed by Ricketts.*

Mackmurdo did not remain alone in his ideas on graphic art. Some five to ten years later other artists began to appear and other journals to be created in which similar tendencies were active, without dependence on Mackmurdo and also, it must be admitted, without the intensity of his title-page of 1883. The most important personalities are Charles Ricketts and Mackintosh. *The Dial*, the journal of Ricketts and his friend Shannon, came out in 1889–1897. Ricketts also illustrated books (Oscar Wilde's *Sphinx* and Longus's *Daphnis and Chloe*, 1893) and in 1896, the year of Morris's death, he started his own printing press, the Vale Press. In the first number of *The Dial* is a page with a square illustration without any text, 5. The profile of a man appears in the right corner. His hair is blown across nearly the whole space of the picture in flame-like forms. The artist was clearly more concerned with the undulations of lines than with his subject-matter. In the bottom right corner is his monogram, composed so vigorously and rigidly that the impression is of a signet rather than a mere monogram.



6, *title page of The Dial by Ricketts.*

Ricketts also designed the title-page of *The Dial*, 6. It is a woodcut incorporating the lettering. Unity of the composition is achieved, although the letters are not homogeneous. They have far-stretching ascenders and descenders in common, but lack a sense of coherence. Even so, they herald certain peculiarities of later Art Nouveau lettering.

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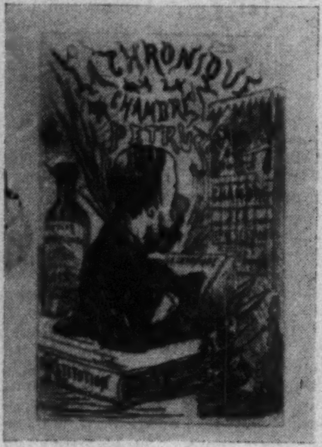
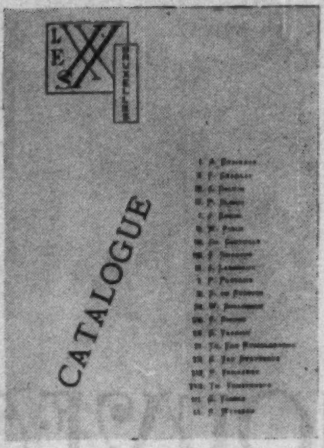
Of the two principal Continental countries in which Art Nouveau flourished early, Belgium and France, France made her most significant contribution in the art of the poster. [J. Meier-Graefe: Der gegenwärtige Stand des Buchgewerbes in Paris und Brüssel, *Zs. f. Bücherfreunde*, vol. I, 1897; J. L. Sponsel: *Das moderne Plakat*, Dresden, 1897.] Jules Chéret was the leader from the early 'seventies to the early 'nineties. In matters of composition he was an innovator, but lettering, down to the time of the posters of 1894, he left to his draughtsman Madaré. [Sponsel, l.c., p. 20.] His texts are brief and easily understood. They are placed in the picture so that they can be taken in without effort.



7, *title page by Felicien Rops.*

Belgium during the crucial years had more importance than Paris in most matters and also in those concerning script. The mediator between France and Brussels was Félicien Rops (1833–98). He lived mostly in Paris and belonged to Baudelaire's circle. He began in the 'fifties as a lithographer influenced by Daumier and Gavarni. In 1858 he turned to etching. As a Belgian by birth he joined *Les XX* in 1884, that progressive group which was founded in Brussels in 1883 and of which more will be said later. His attitude to lettering can be exemplified by the title page of *La Chronique à la Chambre par Petrus*, published in 1870, 7. A bearded dwarf gapes at a puppet show. In his hand he holds a grotesquely long quill. All objects are placed at an angle and overlap each other. Each object is named in thin Roman capitals. The letters here as well as in *La Chronique à la Chambre* are still in the tradition of French book illustration of 1840. The word Petrus is different. The letters have soft rounded contours isolating them from the background, from which they do not differ in any other way. The forms of the letters are curiously doughy. Their height as well as their width vary according to the available space. Where much space was left, letters grow to an excessive length.



8, *title page with signet by Khnopff.*

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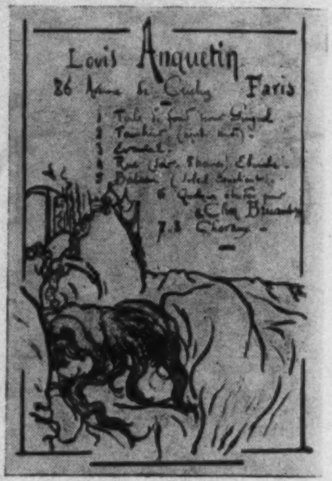
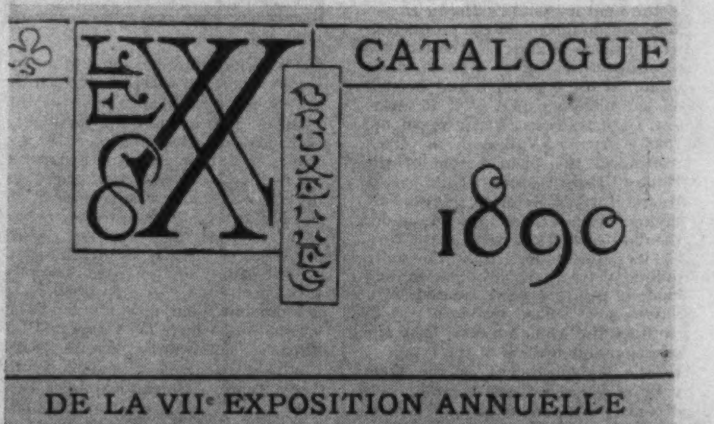


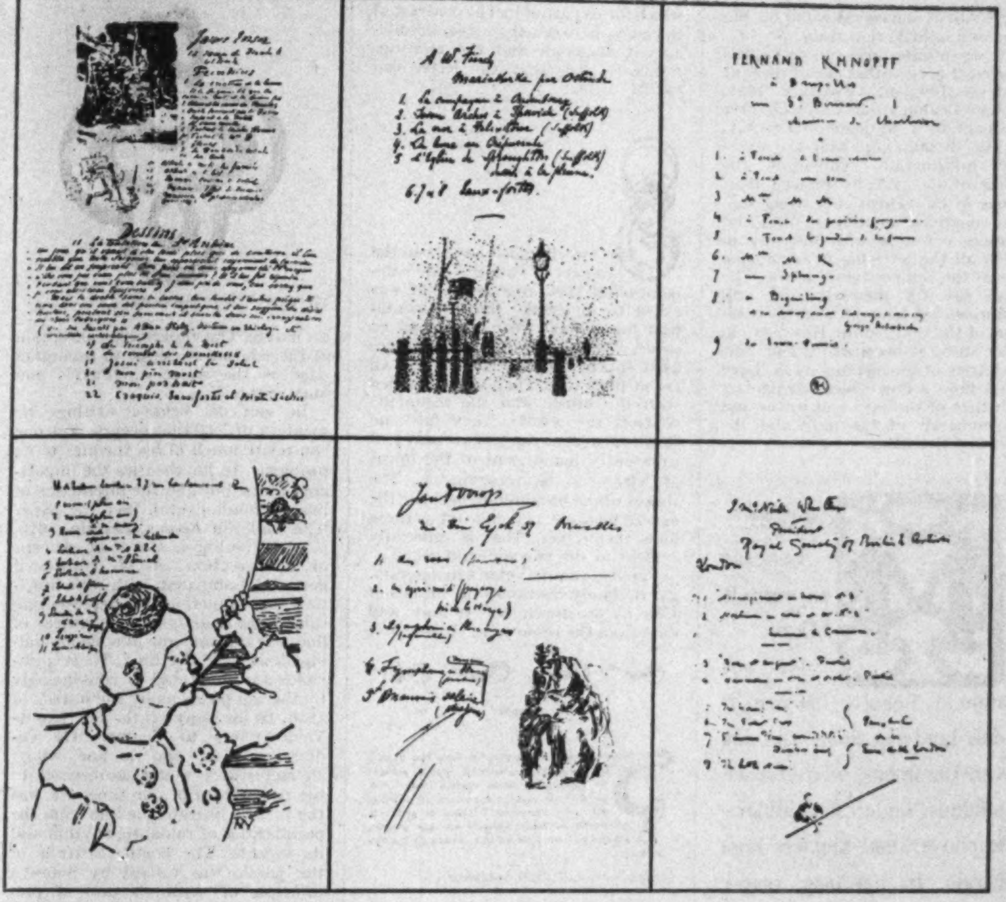
16, *catalogue page by Anquetin.*

More important still, in any comparison between the title-pages of 1884 and 1890, is the fact that the whole page in the second catalogue is pulled together more firmly. What is the explanation of this change of script and composition? Khnopff was a painter, and in his pictures English influence is obvious. So it is not surprising that the title-page of 1890 also shows elements not familiar in Belgium at the time but frequent in England. It must be remembered that both the *Hobby Horse* and *The Dial* existed in 1890.

Startling as the progress from the title-page of 1884 to that of 1890 is, 1890 was not the year of the first or the most important typograph-



9, *development by Khnopff of title page for Les XX.*



10, 11, 12, 13, 14, 15, *pages from the catalogue of Les XX in 1888, designed by Ensor, Finch, Khnopff, Toulouse Lautrec, Toorop and Whistler.*

ical innovations in the catalogues of *Les XX*. In 1888 they had brought out a catalogue which rightly made a great stir. [O. Maus: *Trente années de lutte pour l'art*, Brussels, 1926, p. 69.] In it every artist exhibiting was given a page to list his works in his own handwriting and with his own layout. This whole idea is, of course, eminently significant in our context, and since the pages are drawn by such artists as Ensor, Finch and Khnopff, all three founder members of *Les XX* and by foreign visitors such as Toulouse Lautrec, Toorop and Whistler, and since, in addition, they are almost unknown, they are illustrated here, 10–15, even where they are of no specific relevance for the evolution of Art Nouveau script. However, our page of the catalogue is, indeed, of the greatest relevance: that by Louis Anquetin, 16.

His drawing is surrounded by verticals and horizontals which do not form a complete frame. They are broken in places, once to make way for the initial of Anquetin's name and twice to allow the drawing itself to extend beyond them. On the left it is a pillow that overlaps the frame. On it lies a girl whose small round face is hardly visible for the undulating streams of her hair. The script is basically a normal written script, but the writing is very irregular with sudden fatter and thinner lines or words. The whole lettering is convincingly and yet apparently quite casually of a piece with the drawing.

Anquetin was a member of the École du Petit Boulevard which had formed in 1887 and to which Toulouse-Lautrec, van Gogh and Bernard also belonged. But Anquetin was in those early years its moving spirit. [H. H. Hofstätter: *Die Entstehung des 'Neuen Stils' in der französischen Malerei um 1890*, Dissertation, Freiburg i. B., 1955, Chap. 6.] A typical painting of his is *Bus-Horses* of 1889, the year in which *The Dial* was started, 17. The way in which the manes of the horses are blown into the picture so as almost to make us forget what they really are is so closely similar to the page illustrated from the first number of *The Dial* that a borrowing on the part of Anquetin must be suggested. Here may well be the very point where inspiration from English graphic art among this group of French painters and then amongst the young Belgian artists began. But there are no further works in France and Belgium in which script plays an essential part, and so nothing need be shown here until we come to Toulouse Lautrec's posters and the graphic explorations of van de Velde.

In the case of Toulouse Lautrec, it can be shown that his interest in lettering was awakened only by the problems inherent in poster design. The difference between Toulouse Lautrec and Chéret is that Lautrec draws his letters on the lithographic stone as part of the process of drawing the figures and setting of the poster and together with it. This is proved by the fact that in all the various stones needed for preparing the parts of the composition which will appear in the individual primary colours the lettering is contained. Only one of Lautrec's posters can here be illustrated, 19. In the *Divan Japonais* of 1892 the type is Roman drawn in dark outlines only. Inside the outlines all is white. The short strokes into which the outlines are broken up give the letter a restless, frayed, accidental appearance, an effect no doubt intended. The composition of the *Divan Japonais* is typically Art Nouveau, especially in the identity in terms of pattern between the letters and the fish.

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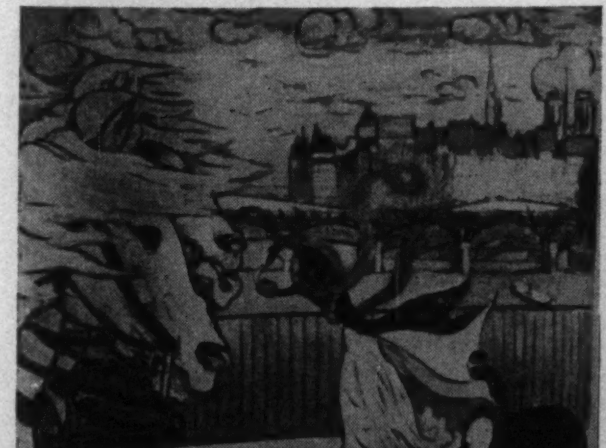
However, of van de Velde a good deal more must be said. He was born in 1863 and died less than a year ago. The members of *Les XX* first noticed him in 1886. [O. Maus, l.c., p. 49–50.] He was mentioned as a skilful painter by Rysselberghe and Heymans. In 1889 he joined, at the same time as Georges Lemmen [*ib.* p. 84.] Before he joined he had followed the Neo-Impressionists round Seurat. Then, after an illness and a crisis, Finch, who belonged to the group round Seurat but who was of half-English descent, drew his attention to Morris and the Arts and Crafts. [Maus quotes a letter from Whistler which shows that Finch knew Whistler; *ib.* p. 48.] So van de Velde decided to turn from art to decorative art. Seurat had said: that an artist's first preoccupa



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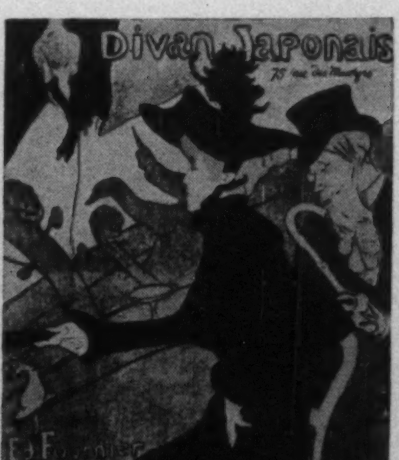

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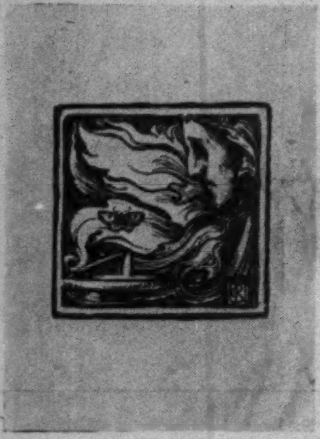

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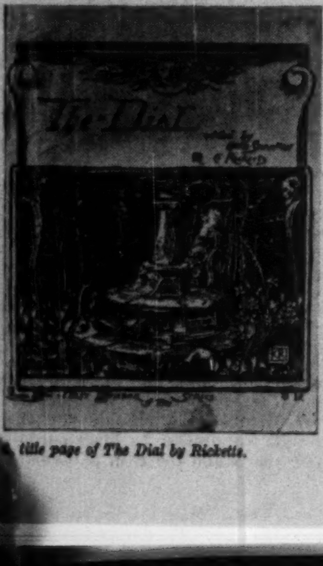

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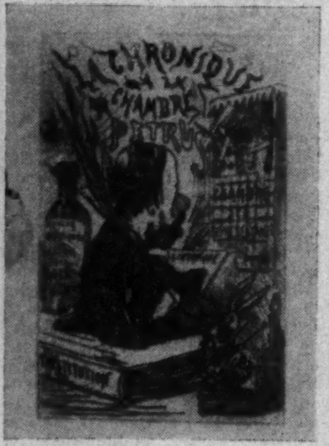

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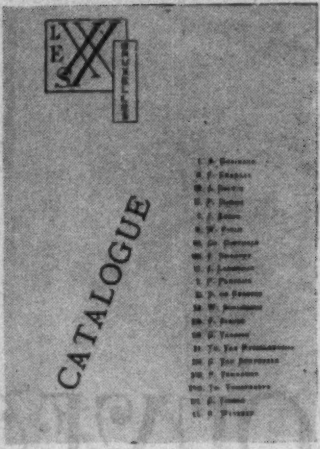

LES XX

BRUXELLES

CATALOGUE

8, title page with signet by Khnopff.

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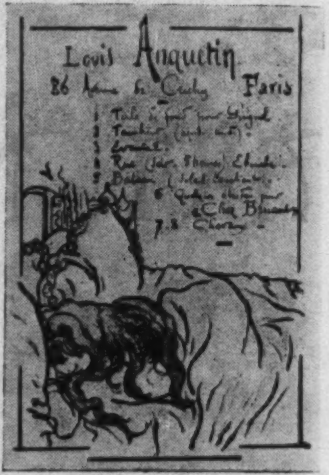

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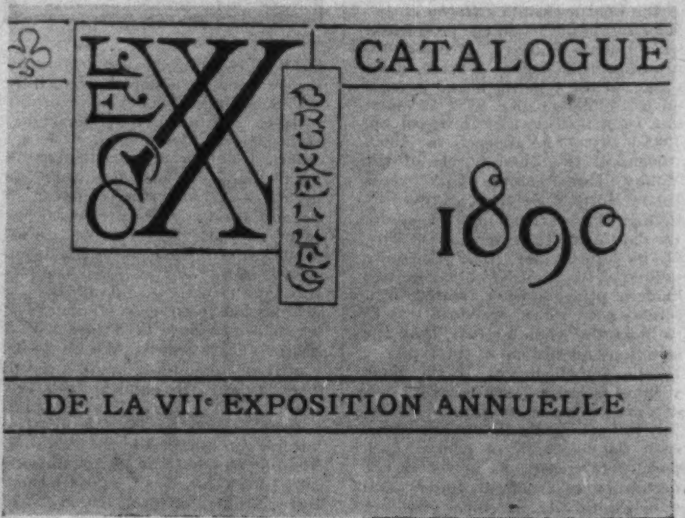


LES XX

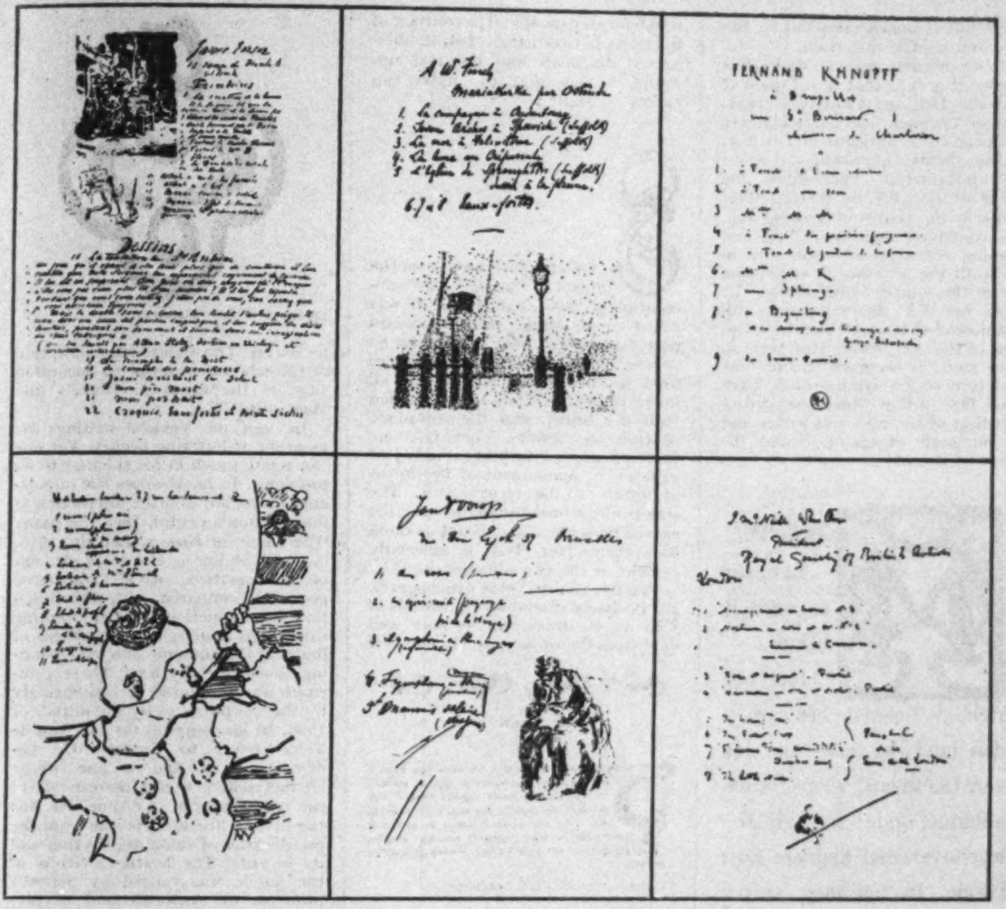
BRUXELLES

CATALOGUE

1890

DE LA VII^{e} EXPOSITION ANNUELLE

9, development by Khnopff of title page for Les XX.


Dessins
A. W. Finch
FERNAND KHNOPFF
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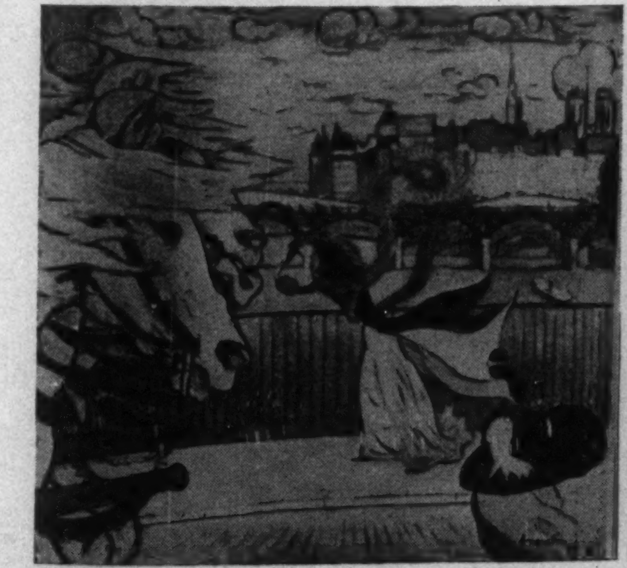

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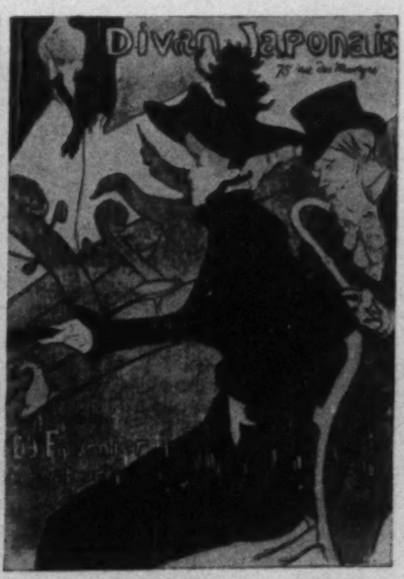
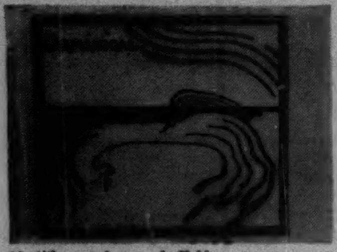


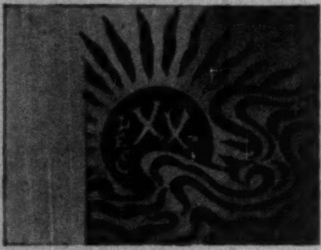
18, *poster by Toulouse Lautrec.*



19, *title page by van de Velde.*

tion before his canvas ought to be to decide 'quelles courbes et quelles arabesques vont en découper la surface.' [J. Rewald: *G. Seurat*, Paris, 1948, p. 55.] Such notions must have impressed van de Velde greatly. He was also in touch with van Gogh who met Seurat in this same year. [A. M. Hammacher: *Catalogue of the Kroller-Müller Museum*, Otterlo.] In addition van de Velde speaks of inspiration received from Japan and also from Puvis de Chavannes, whose work is 'the matrix of the ornamental.' [*Die Renaissance im Kunstgewerbe*, 1901, p. 44.] But in spite of undergoing this variety of influences, he yet managed to remain entirely himself.

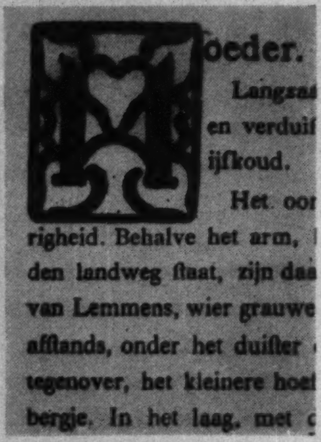
His first piece of graphic art containing lettering is the title-page to Max Elskamp's book *Dominical*, 19. It is a woodcut and was made in 1892. That the drawing was done with the brush is unmistakable in the softness and roundness in which the lines start and in their curves and scrollings and taperings. The motif may be light dunes in front of a dark sea, but it is entirely drawn into a linear composition in two dimensions. The word Dominical is written in capitals with all uprights gently bent and with the angles of M and N turned into curves.



20, *title page by van de Velde.*

The script is somewhat small on the page and a little uncertain.

If one enquires into van de Velde's sources, it is clear that one of these at least was Belgian. As early as 1891, Georges Lemmen had made his first title-page to a catalogue of *Les XX*, 20. This, besides imparting the necessary information symbolizes the claims of *Les XX* by placing their names in the centre of a rising sun. This contrived identity of form and meaning connects with the way in which all the lettering is an organic part of the compositional whole. The words *Les XX* themselves are still reminiscent of Khnopff's on his catalogue of the year before. However, on closer study it becomes evident that the letters of for instance, 'Les' have a new flow, a flow which harmonizes with that of the rays and waves and the numerals of the date and the letters of Bruxelles.



oeder.

Langzaa

en verduif

ijſkoud.

Het oor

righeid. Behalve het arm,

den landweg ſtaat, zijn daa

van Lemmens, wier grauwe

afſtands, onder het duiſter

tegenover, het kleinere hoe

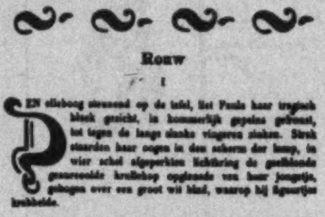
bergje. In het laag, met

21, *vignette by van de Velde.*

In 1893, some members of *Les XX* founded the magazine *Van nu en straks*. Among them were Lemmen, van de Velde, Finch and van Rysselberghe. In the first number there were small pieces by them, mostly vignettes. The layout of the number is pleasant. On page 17 the initial M of the word moeder is by van de Velde, 21, Moeder is Flemish for mother and hence perhaps the four heart-shapes against which he set the fat uprights of his M and the fifth which forms part of it. The contrast of thickness between these two double-curved diagonals and the two uprights is such that the letter can hardly be read.

So forceful must have been the impact of van de Velde's decoration of 1893, that in 1896 he was asked to undertake the ornamental part for a whole year of *Van nu en straks*. The initials and the tail-pieces used in the present article are all taken from this. They were designed with the brush, and the technique controls the results. They have no frames or accessories and are only just sufficiently reminiscent of the forms of letters to be recognizable. The shapes of the background between the curved lines are as significant as these lines themselves. That is especially evident in the two different Ss.

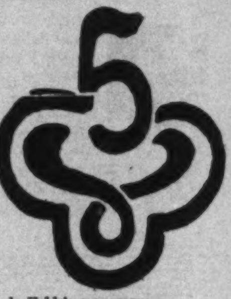
Finally, van de Velde's monogram, 23. It closely resembles the initials of *Van nu en straks*, and it may well date from the same year. [It was first published in *Dekorative Kunst* in 1899.] The three initials H, v, V are stylized into an ornamental totality and placed without any concomitants against the white of the ground. The H is made of one line and is reminiscent of a 5. The outer V is of trefoil shape, the inner is placed concentrically and provided with a bold loop. The three lines do not overlap anywhere. Van de Velde designed his letters as part of posters, title-pages or pages in magazines. They were never done as script for script's sake and have no special prominence in his œuvre. The underlying conception of the relation of script to decorated page is the same as Blake's and Mackmurdo's.



Rouw

I

22, *typical van de Velde headpiece.*



23, *van de Velde's monogram.*

In van de Velde's writings no mention of lettering occurs. Yet one can relate much in his theories to its problems. In his theories the importance of the line and the interaction of lines is fundamental. [See the paper 'Die Linie' in *Essays*, Leipzig, 1910, p. 41.] The line is the basic element of his creation, it is 'translated gesture.' Compared with this function the function of representing something is marginal. Sequences of lines are the outcome of a 'commanding desire for rhythm.' These principles are illustrated as convincingly by the tail-pieces as by the initials of 1896. In his essay on the line van de Velde refers to Seurat: 'He endeavoured to find a line whose characteristics would correspond to the new efforts of our time. He was the first to liberate the line from the peculiarities of romantic rhythm and its accents. The hostile attitude of the public was caused by Seurat's principle of synthesis and of preordained laws to which his silhouettes had to be subordinate.' In exactly the same way the letters themselves in his initials of 1896 are subordinated to laws of linear construction. That constitutes their fascination and endows them with a power beyond the limits of a dated phase in the development of lettering.

* * *

HUBS WITHOUT WHEELS

The completion of the Market Square at Harlow, the first and most vital section of the eventual town centre, invites an appraisal of the town-planning practices that helped to create it. However, standards of comparison are not easy to find, and even that highly-regarded yard-stick, the town centre of Vällingby, is one that needs to be used with caution.

Harlow is an independent satellite town, and was not intended at any stage to be a commuters' dormitory for London; Vällingby, on the other hand, is a sort of super-suburb of Stockholm, which is intended ultimately to have some independent life of its own, but such an independence was not, so to speak, built into the planner's brief from the start.

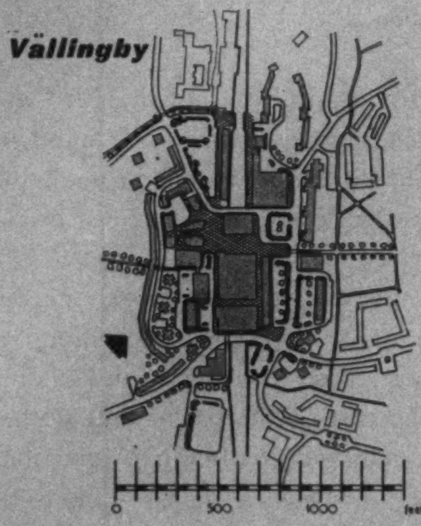
Nevertheless, comparisons can be made at close range, leaving on one side, for the moment, the larger picture of social policy, and there are striking similarities between the two. Both accept the presence of large areas of car parking so disposed as to isolate some part of the market area from the rest of the town, and both try to re-establish contact between market and town by a prospect of tall towers of flats seen over the parking zone. At Harlow the link is tenuous because there is only one such tower-block, while at Vällingby the different pattern of Swedish living has made it possible to create a rank of such towers, whose presence is made more appreciable by their being sited on rising ground. Vällingby has a further advantage in that the location of the commuters' railway station in the middle of the square physically guarantees a certain amount of bustle and life at all hours that the trains run, whereas Harlow runs some risk of 'going dead' after the shops have shut.

On the other hand, the planning of Harlow's centre is richer, both spatially and topologically. In spite of the picturesque roofscape of the two central blocks at Vällingby, they remain essentially a couple of isolated monuments in the middle of an open piazza across which the shopper must walk some distance to the other shops, cinema, etc., situated on the perimeter.

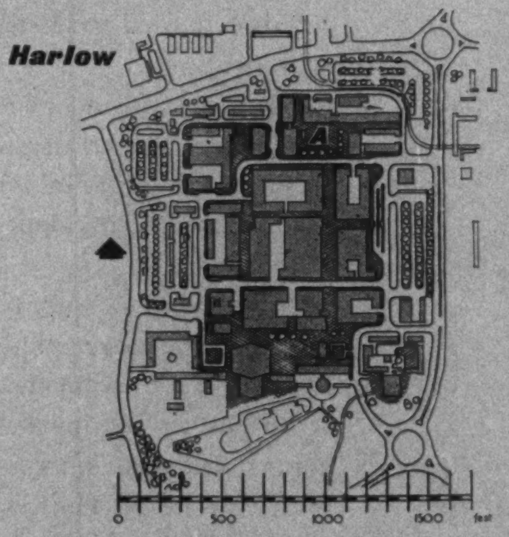
Harlow, on the other hand, has its blocks of shops disposed so as to frame an almost completely enclosed and sheltered square, across which short pedestrian transits interlace through a live shopping area of stalls and booths. At the western end of the square pedestrian circulation leaves ground level and ramifies into a series of first floor bridges and balconies. This usage, which can be paralleled in other, similar developments in England (e.g. at Coventry) has much to recommend it. Not only does it disentangle different streams of pedestrian circulation at points of congestion, but it also makes for a more efficient utilization of the buildings without the complication of extra access stairs, and it also follows naturally from the now firmly established practice of locating maisonettes, with their front doors at first-floor level, above rows of shops. Indeed, further development of the idea of such high-level pedestrian circulation might clear more ground space for car-parking and vehicle turn-rounds, and thus lead to more compact planning than either Harlow or Vällingby can yet show.

COMPARATIVE LAYOUT OF VÄLLINGBY AND HARLOW CENTRES

Vällingby Centrum offers social, commercial and cultural services to an estimated ultimate population of 100,000. The scale of these services is suburban, and a station on the rail link with central Stockholm forms part of the centre, which is planned as a sequence of three large blocks of buildings, islanded in a broad piazza ringed by smaller structures.



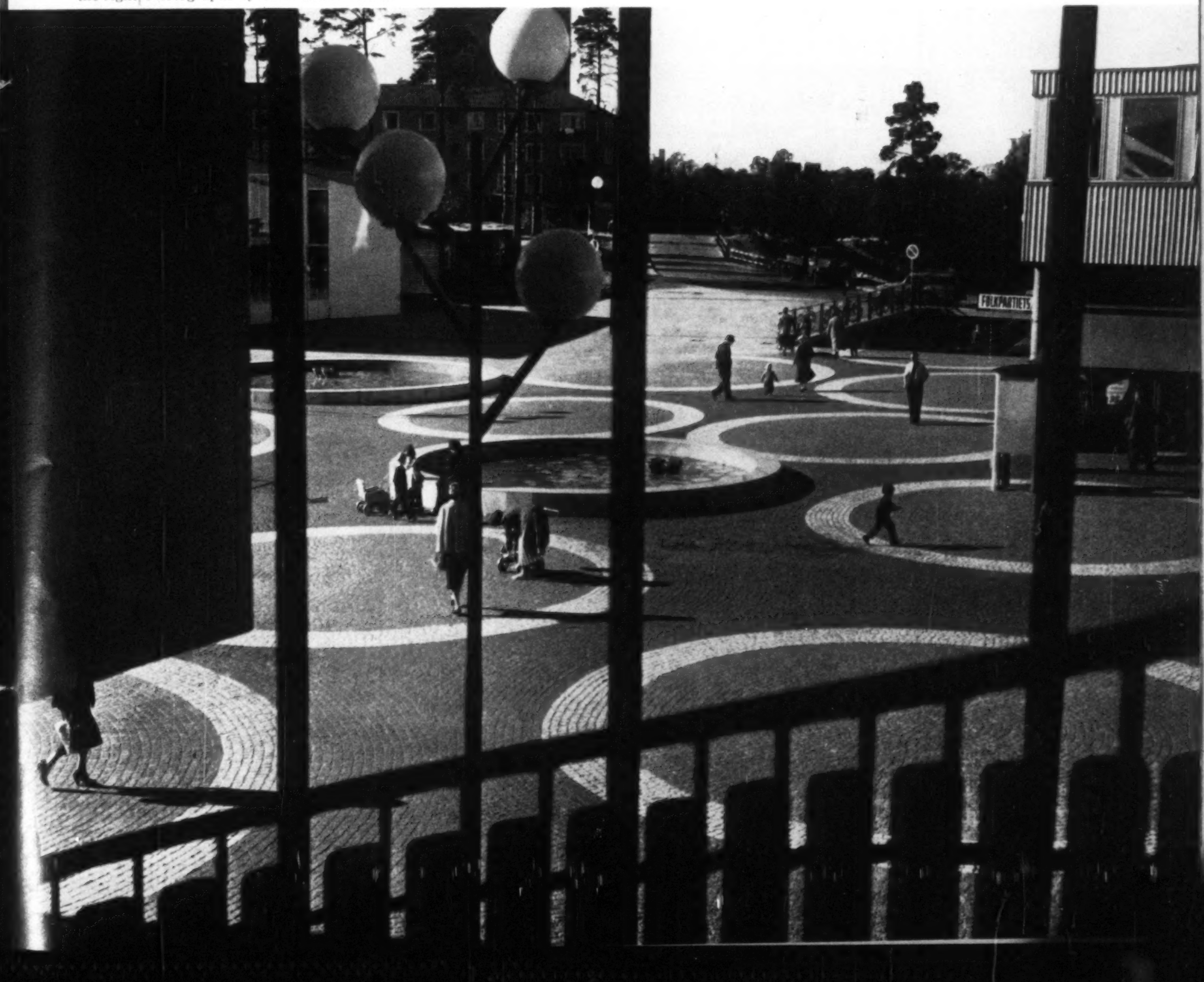
The High, Harlow, serves a New Town population of ultimately 60,000 on central, rather than suburban scale, including large department stores, and thus draws in shoppers and others from an unspecified catchment area beyond its own boundaries. The basic planning concept is of pedestrian walks and piazzas threaded between blocks of buildings, isolated from vehicular traffic by a ring of car-parks.



VÄLLINGBY
information

Vällingby is not a satellite town but a planned suburb: its central area is not, therefore, strictly comparable in social function with that of Harlow. Nevertheless, a pedestrian shopping concourse with offices and public buildings has many visual and architectural problems in common with any other concourse containing similar buildings, and it is these common problems that form the basis of the confrontation of the two schemes on the pages that follow.

1. the western corner of the pedestrian concourse. seen from the top of the staircase serving the first-floor restaurant of the main block of shops. The station building is seen to the right. Photographs by G. E. Kidder Smith.



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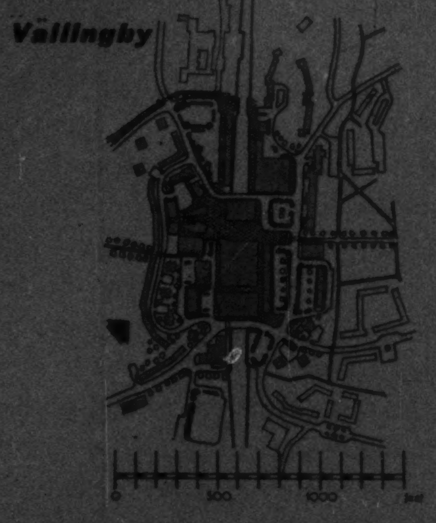

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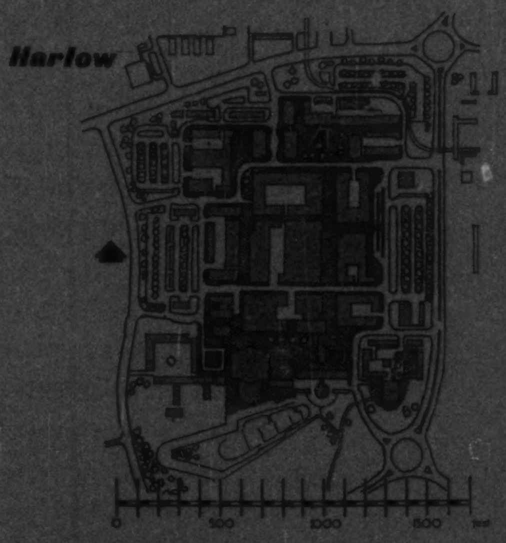

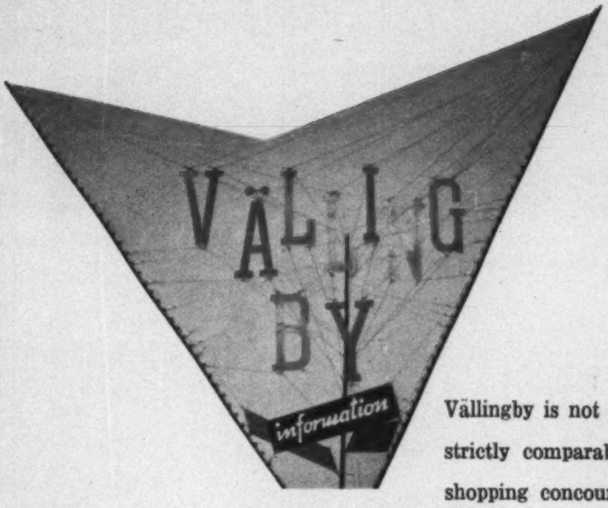

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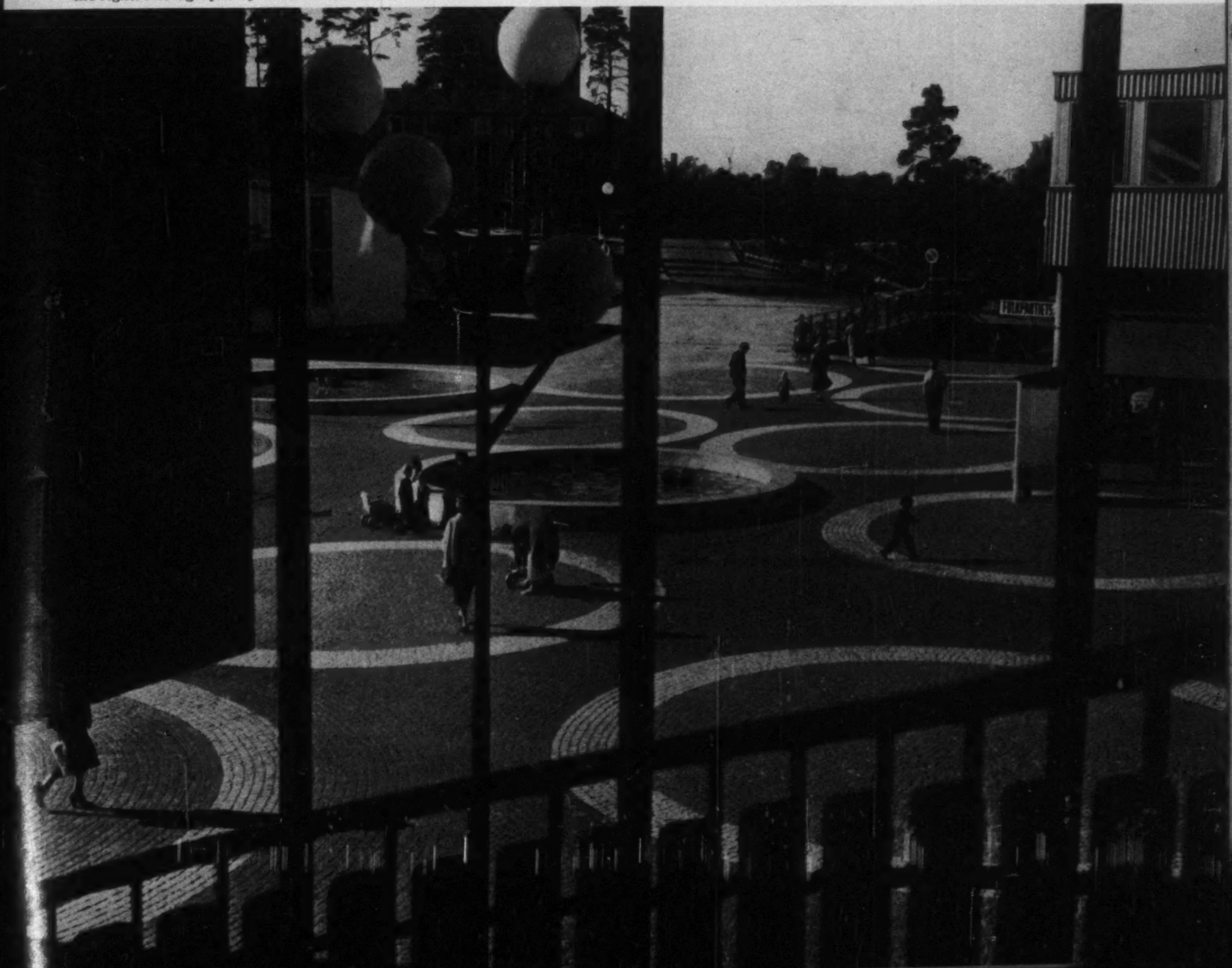

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Vällingby

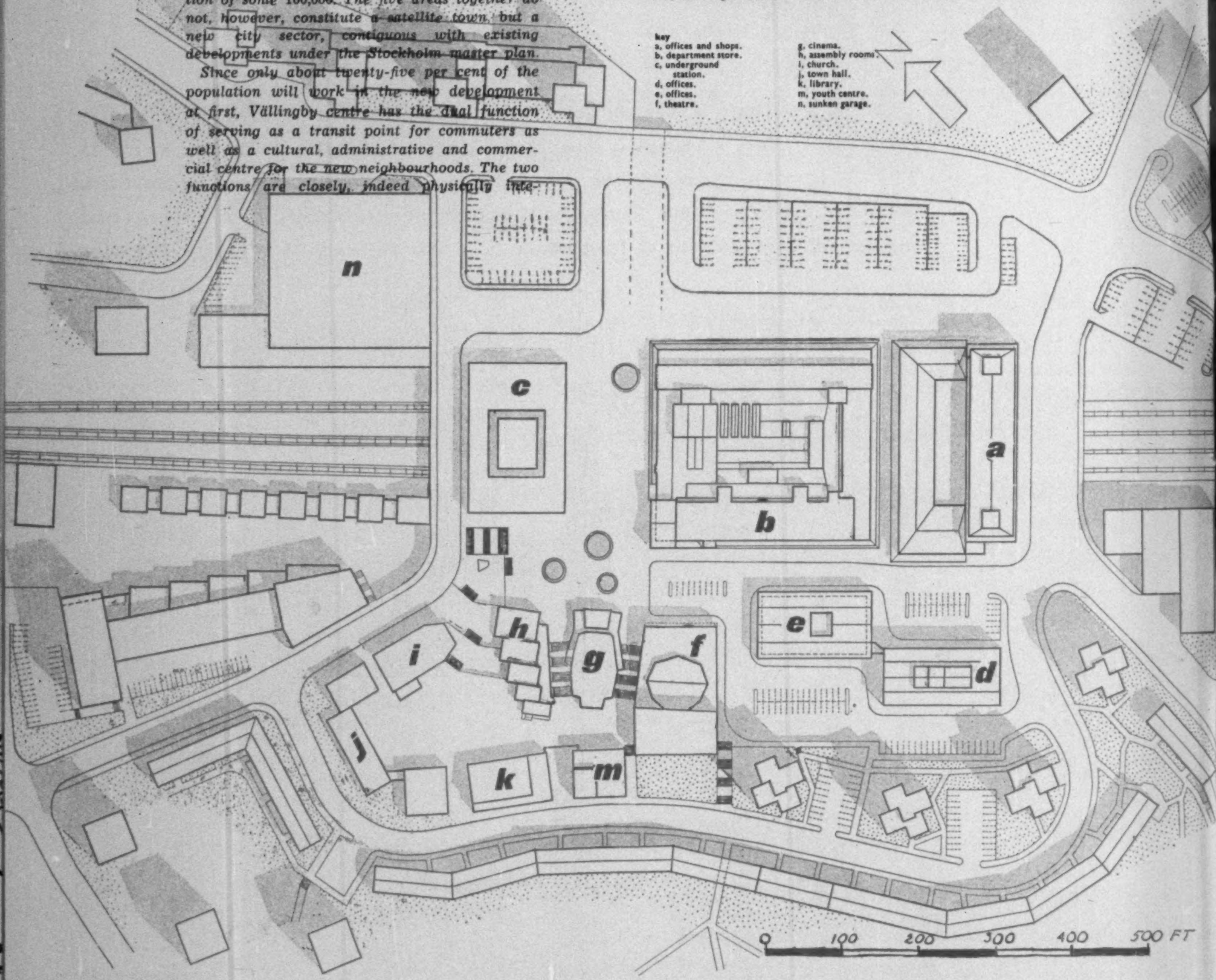
2, Vällingby Centrum, seen from a tower-block on its eastern side, looking the main pedestrian concourse.

Though the planned suburb of Vällingby has an intended population of 23,000, its town centre is intended to serve also four other suburban areas —Rackstra, Blackeberg, Hasselby Strand and Hasselby Gard—already built or under development, that should give an ultimate total population of some 100,000. The five areas together do not, however, constitute a satellite town, but a new city sector, contiguous with existing developments under the Stockholm master plan.

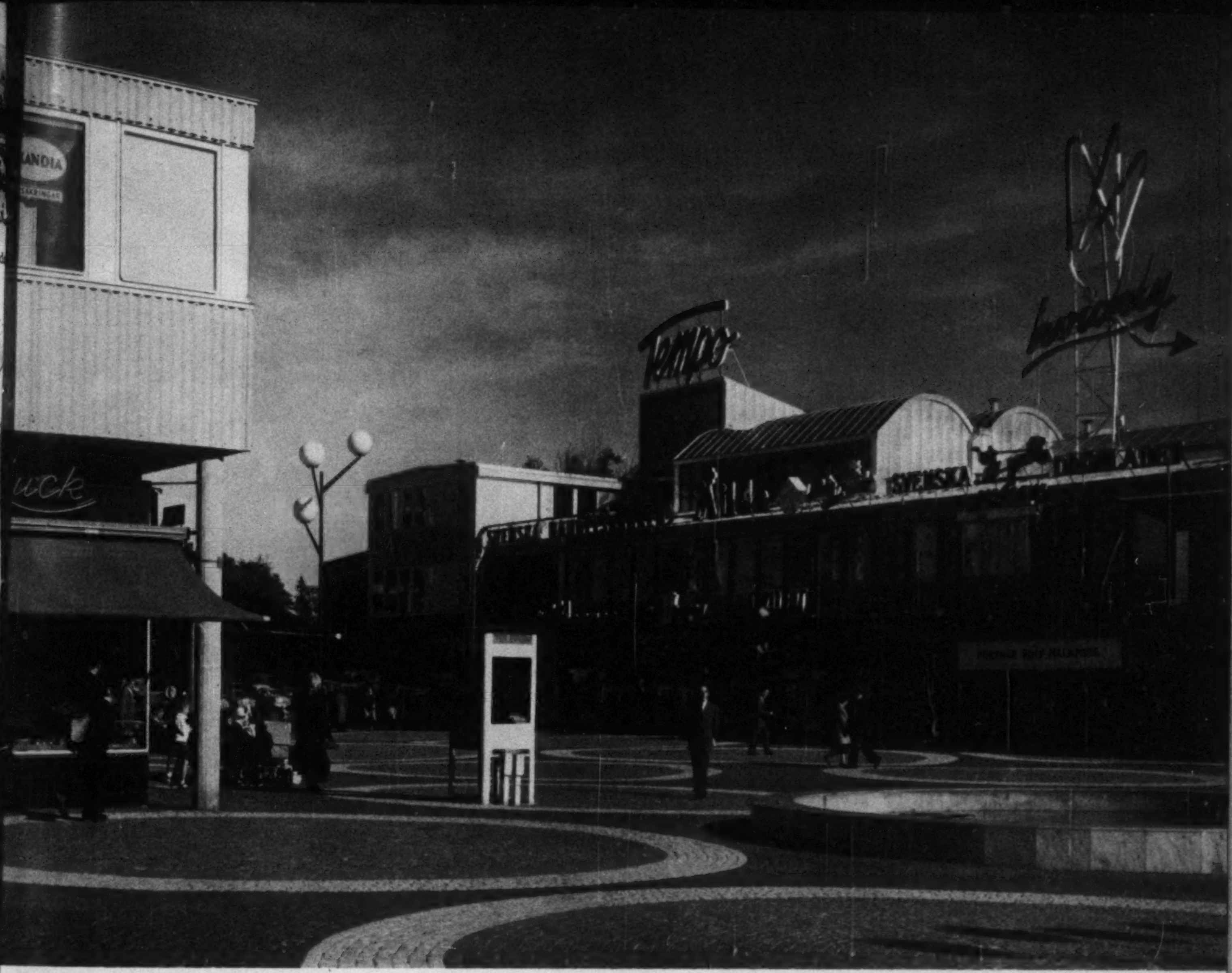
Since only about twenty-five per cent of the population will work in the new development at first, Vällingby centre has the dual function of serving as a transit point for commuters as well as a cultural, administrative and commercial centre for the new neighbourhoods. The two functions are closely, indeed physically integrated, since the main blocks of shops and offices are situated directly above the Tunnelban, and have access to its sidings below ground, and the exit from the station delivers travellers directly to the pedestrian concourse that runs up to the public buildings on the south-west side of the centre. The bus station lies immediately adjacent to the station on the other side, and is flanked by the main car-parking area.

The main square, with the railway beneath it, occupies the bottom of a shallow valley, with the ground rising more or less steeply on either side, The public buildings—Town hall, theatre, cinema, library, etc.—are distributed up this slope at the western corner of the square, and make a separate enclave around their own car park, with steps leading down to the main concourse. At the opposite corner, pressure of parking needs led to the decision not to build all the shops originally intended for that site, but to lay out the main car park mentioned above. At the northern and southern corners, residential accommodation is brought close up to the centre itself, in the form of ranks of tower blocks (those to the north having shops and offices underneath) standing on the first slopes of the rising ground.

Thus, in spite of the fact that it is completely ringed by motor roads, the square is kept in close touch with the housing that surrounds it



3, air view of the central area at Vällingby from the south, showing the relationship of the Centrum to the surrounding housing.



4

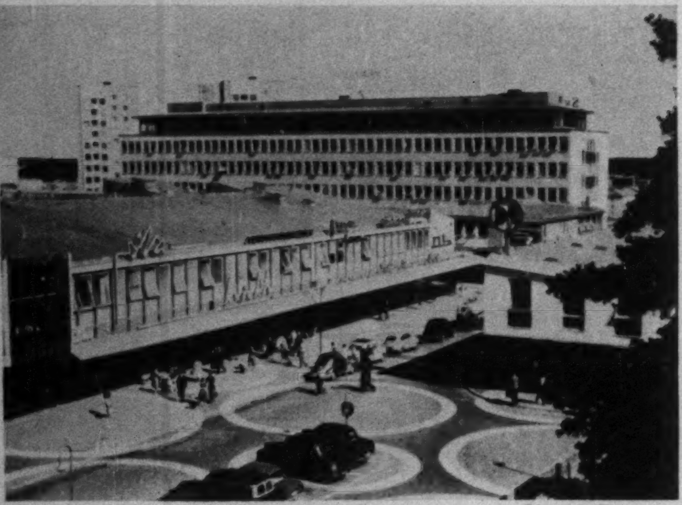
4, the station building, by Magnus Ahlgren, left; the main pedestrian concourse; and the block of shops by Backstrom and Reinius, right. Although the structure of this last block is a very regular system of columns and beams, rising from the level of the railway below, full advantage has been taken of functional differentiation above ground level to create a diversified sky-line. 5, a view in the opposite direction, with the station on the right, and the uncompleted cinema and assembly rooms beyond.

Vällingby

in its park-like setting, one specific point that was borne in mind by the planners being that the lighted windows of the surrounding apartment blocks would keep the central area visually alive at night, after the shops and offices were closed. Throughout those residential areas, circulation is laid out on Radburn principles—that is, motor-cars, cyclists and pedestrians have their own independent routes to travel on, and this system is continued right into the centre, being brought into the square on the north-eastern side through a tunnel that leads under the motor road, and connects the main pedestrian concourse with the area of greenery set aside for festivals and entertainment.

5

Vällingby



6

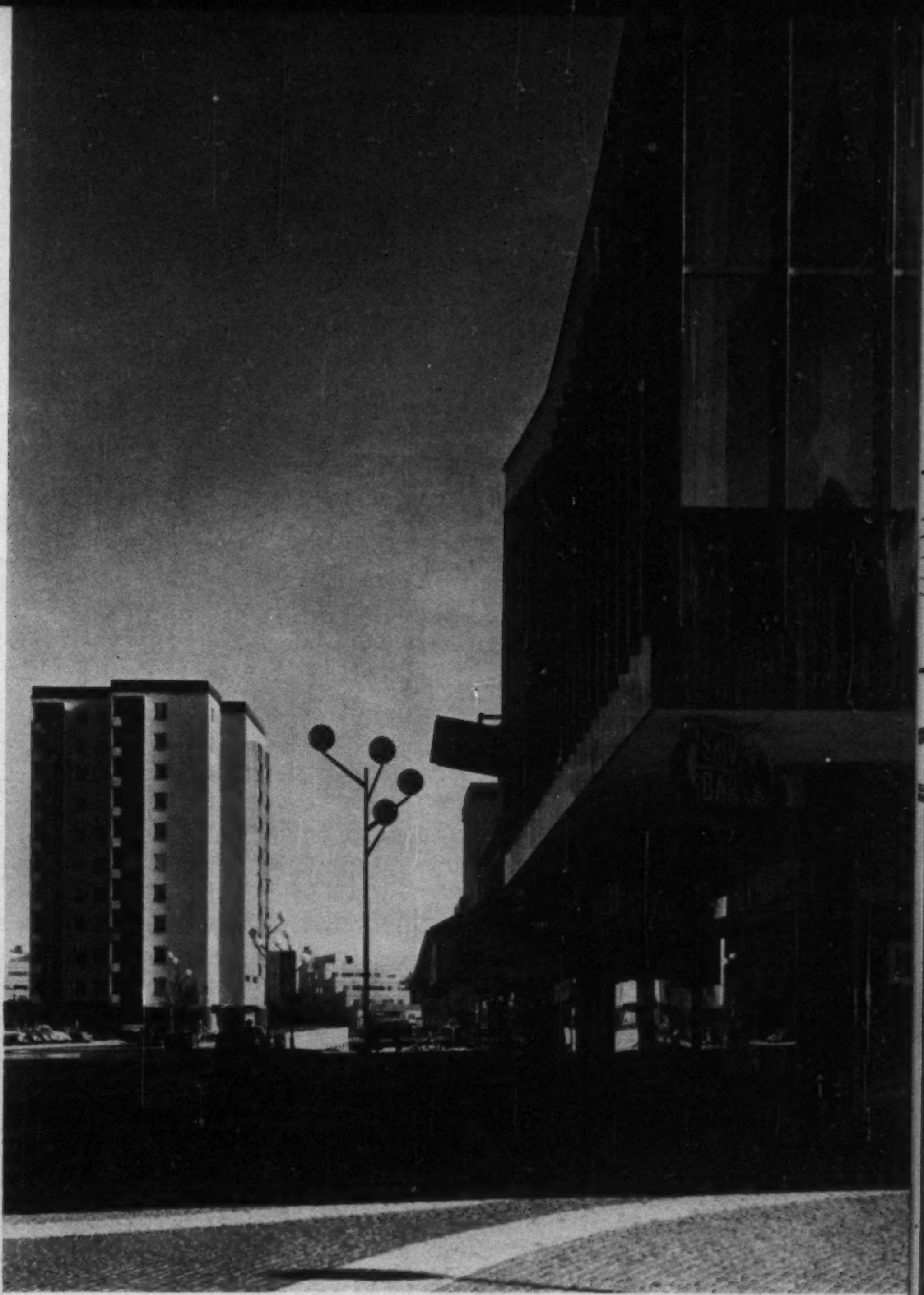
7

8

6, the main block of shops, with the mixed block of two-storey shops and six-storey offices beyond, and another mixed-occupancy block, of shops and social services offices, right.

7, a view through the narrow concourse between the two blocks of shops toward the main car-parking area beyond.

8, shoppers and hanging signs under the canopy of the main block of shops; a similar canopy shelters the windows of the further block, beyond the narrow concourse. Some of the signs, both hanging and illuminated, at Vällingby, have been criticised by foreign observers, but their general quality is extremely lively, and they do much to build up the animation of the total scene.



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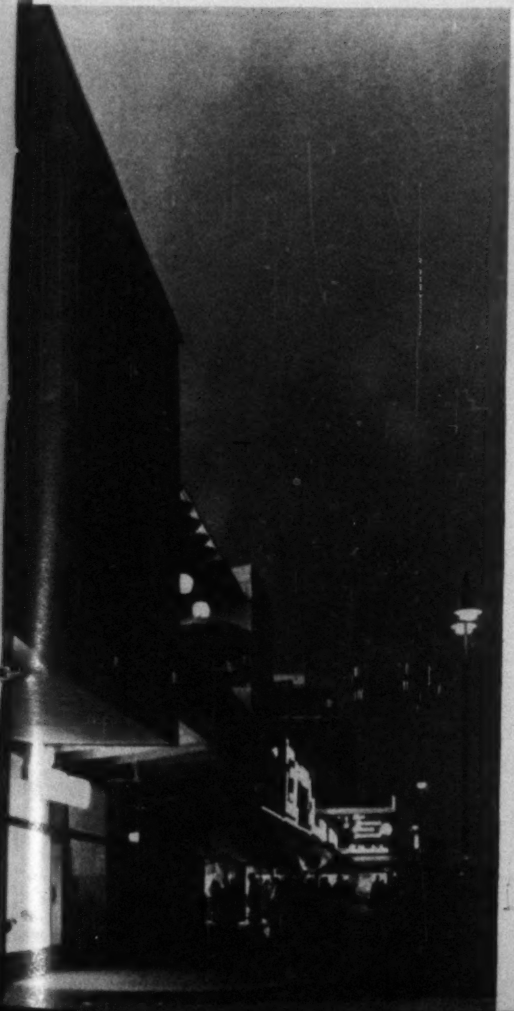


10

9, at the western corner of the main block the standard canopy is replaced by the overhang of the first-floor restaurant. At the far end of the concourse is one of the towers of flats by Jarl Bjurström, beneath which runs a single-storey group of offices and shops.
10, a night view, taken from the same viewpoint, but looking along the other face of the block. Between the two projecting parts of the restaurant is a first-floor balcony. Note the earlier type of street-lamp, later replaced by the 'tree' pattern seen in other illustrations.

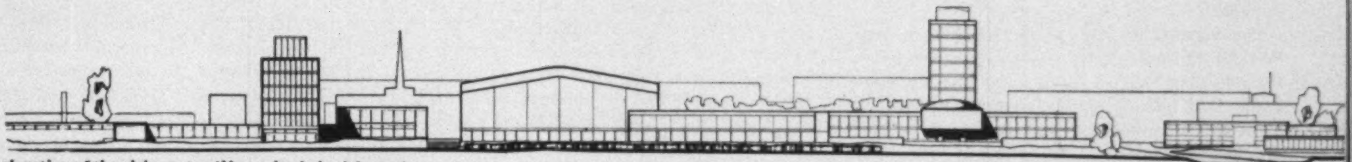
Vällingby

11

12

11, the booking-hall of the Tunnelban (underground railway) connecting Vällingby with central Stockholm.
12, one of Bjurström's tower blocks seen from the northern corner of the station building.
13, the platform of the Tunnelban from the low-level walk to which access is gained by the flight of steps seen in 1, p. 375.

13



elevation of the civic centre (M on plan below) from the south.

Harlow is not a suburb but a complete town, and it must provide all cultural, administrative and commercial services short of those proper to a metropolis. In planning the whole central area (see map below), all these have been brought together in such a way that their overlapping interests help vitalize the urban scene which comes to a climax in The High (coloured on the map). In the commentary which starts below the Architect-Planner, Frederick Gibberd, discusses the planning and architectural principles behind the design.

HARLOW

functions of the central area

In order that the town centre will be at all times alive and busy, as many different activities as possible are drawn into its orbit. Unlike the unplanned town, buildings like the sport stadium, hospital and the swimming pool are all associated with the central area.

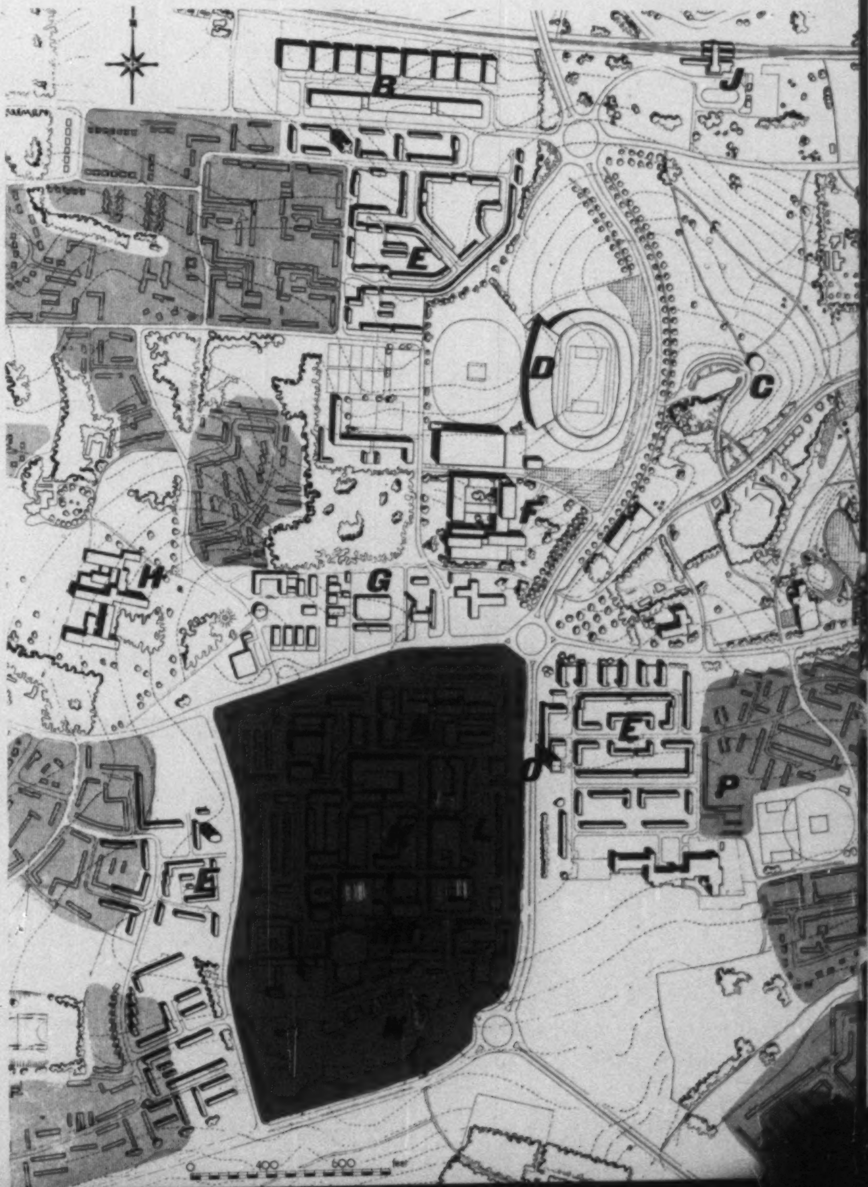
The central area extends from the railway station on the centre of the northern boundary of the town to a plateau on the top of the hill where the main business and civic centre dominates the rest of the town. The disposition of the parts is shown on the plan (right) and is broadly similar to the original sketch design. The old railway station Burnt Mill has been redesigned by the Railway Executive and adjacent to it, on the west, lying alongside the track is planned an area for warehouses and service industry. The town park extends to the south of the town from the Stort Valley and is formed from an existing valley of irregular contour and attractive character.

The swimming pool and open air dance floor sharing restaurant facilities are to be provided at the head of the valley by the Urban District Council. The existing hamlet is retained and two sites have been reserved for hotels, one near the Station and the other near the business centre.

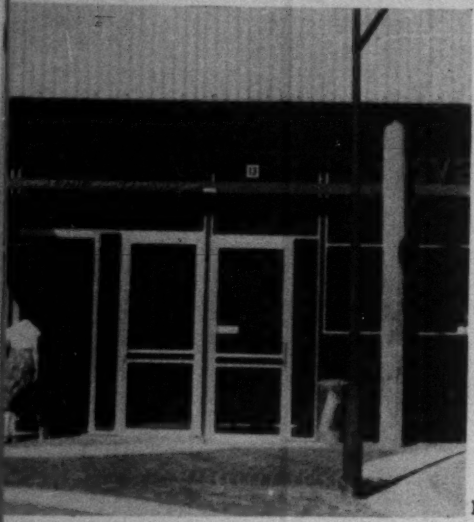
The town sports area is to the south of the service industrial area and forms an extension of the town park. Above the sports area and towards the top of the hill is an area reserved for those ancillary services that require a central position, but are best kept out of a shopping centre as they tend to devitalize it. Buildings already constructed in this area are the fire station by the county architect and the health centre by the development corporation; before long a start will be made on the bus garage and telephone exchange. A service area is set aside for those workshops and warehouses that have close affinities with shopping and a ten acre site is reserved for special buildings. To the west in splendid parkland and near to the health centre will be the 300 bed hospital by Easton & Robertson, upon which work has now started.

PLAN SHOWING TOWN CENTRE (COLOURED) AND CENTRAL AREA

key
A, market square.
B, warehouse and service industry.
C, town park.
D, sports area.
E, housing area.
F, offices.
G, service area.
H, hospital.
J, railway station.
K, shopping.
L, bus station.
M, civic centre.
N, formal garden.
O, main town road.
P, mark hall, Netteswell neighbourhood.



Vällingby



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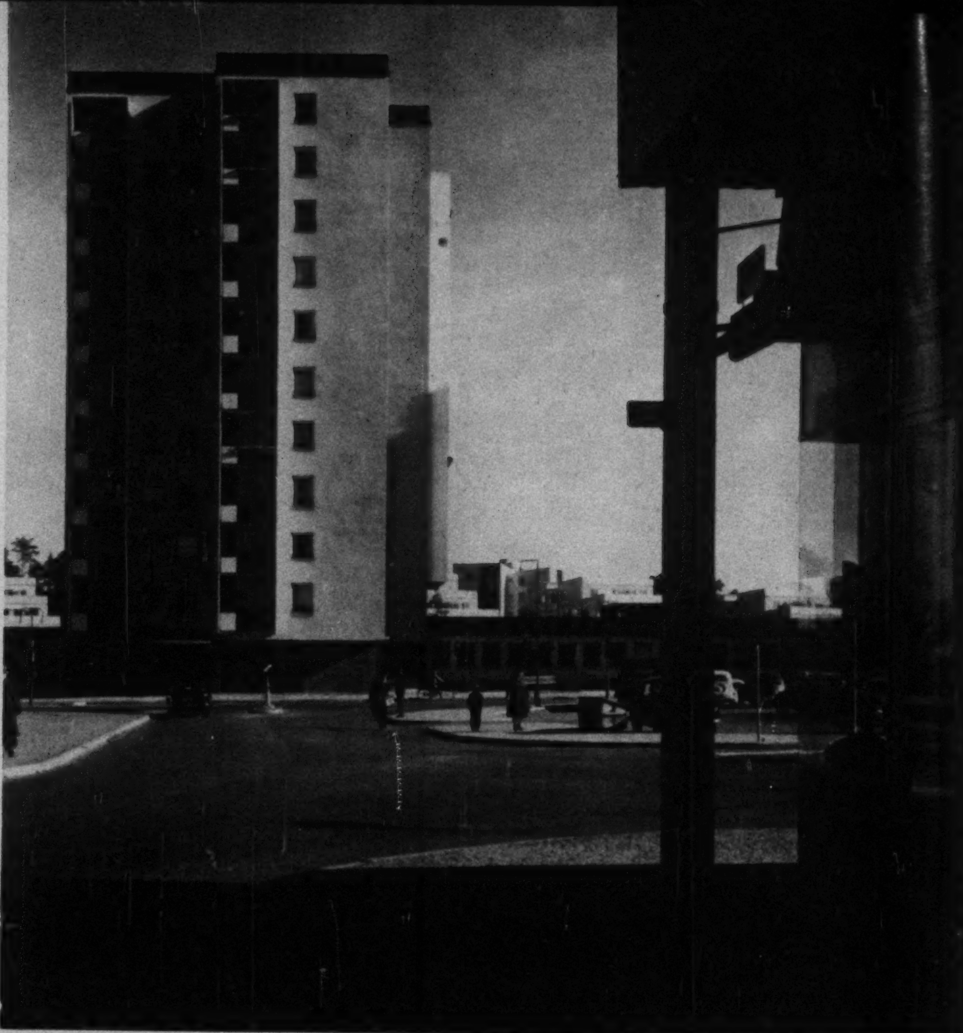

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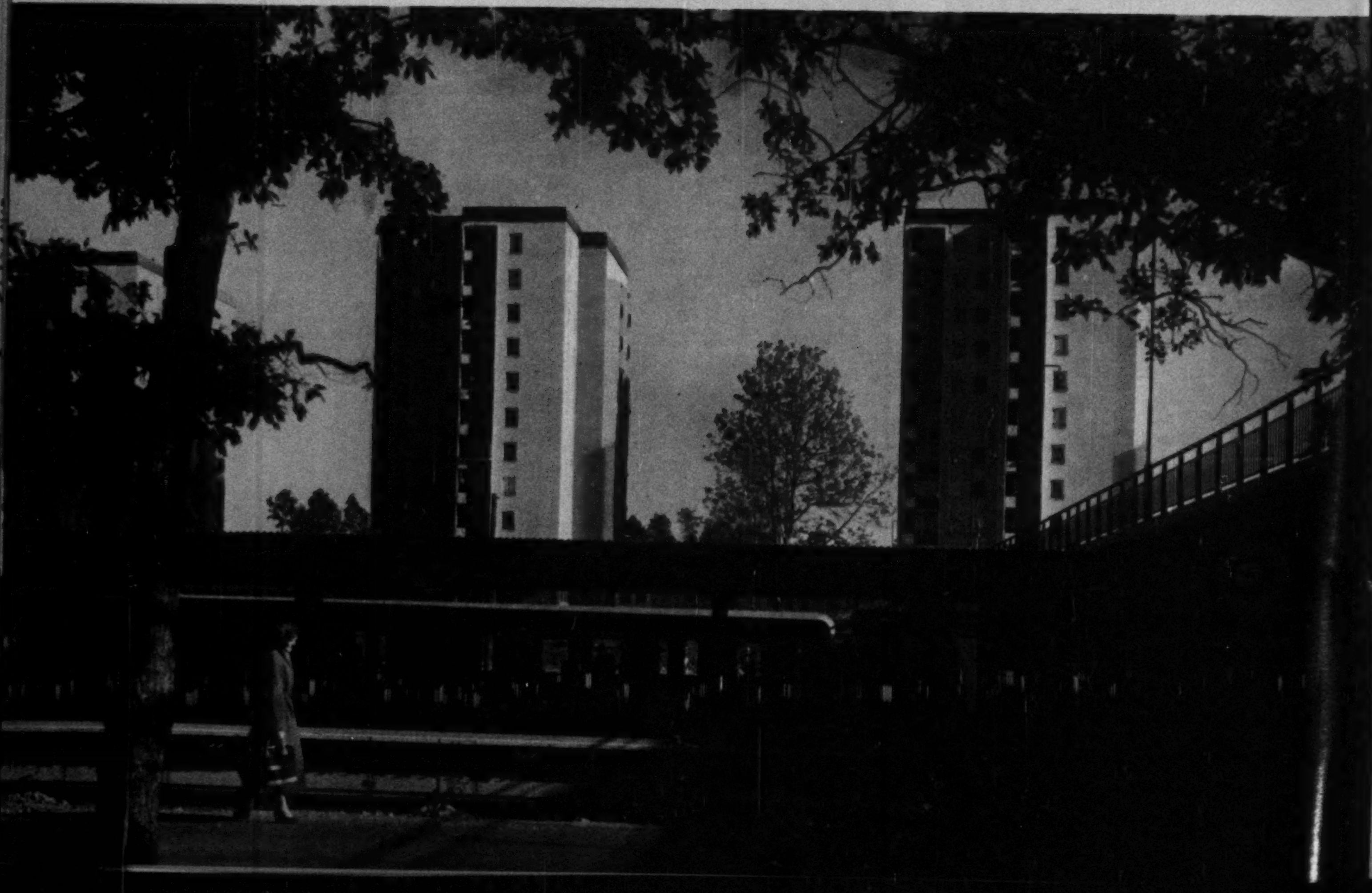

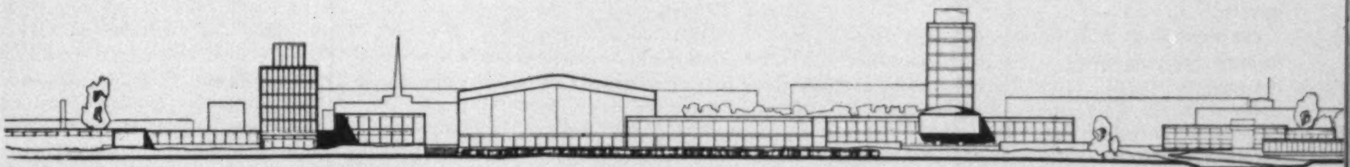

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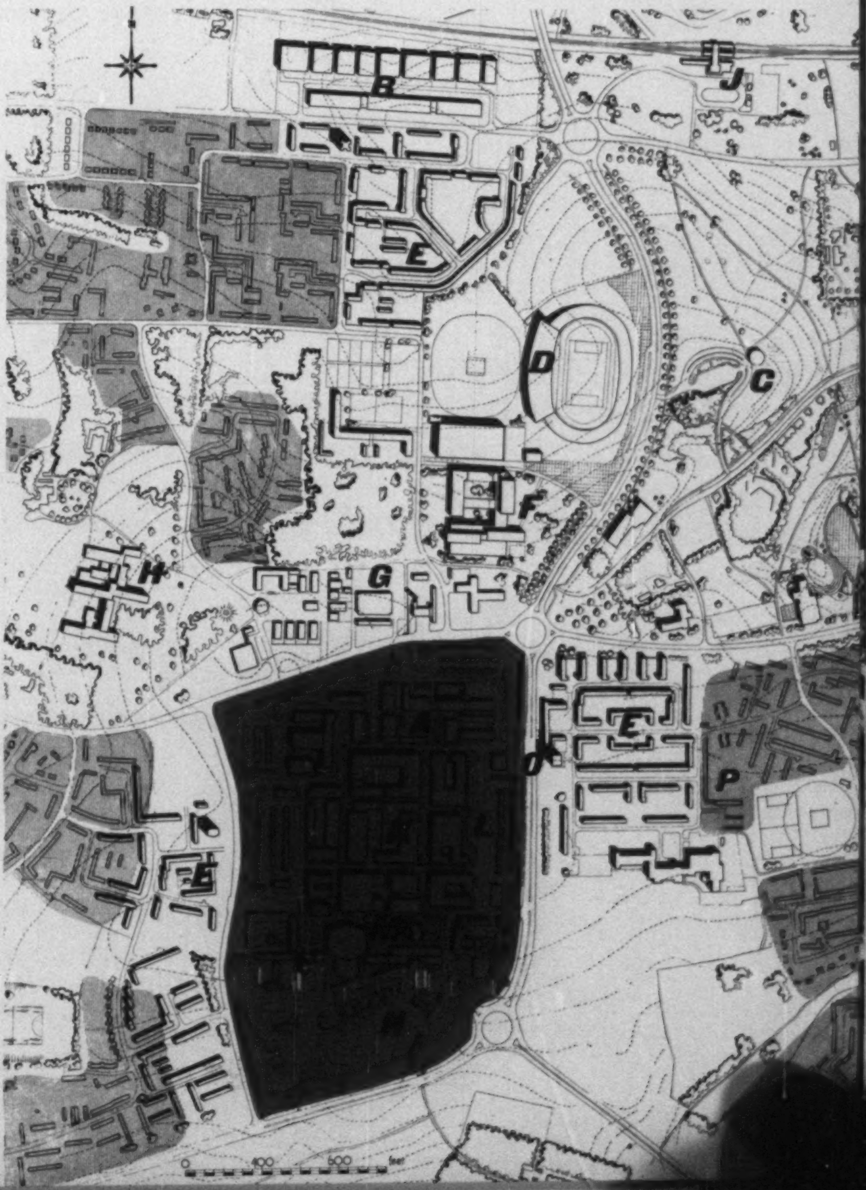
PLAN SHOWING TOWN CENTRE (COLOURED) AND CENTRAL AREA

key
A, market square.
B, warehouse and service industry.
C, town park.
D, sports area.
E, housing area.
F, offices.
G, service area.
H, hospital.
J, railway station.
K, shopping.
L, bus station.
M, civic centre.
N, formal garden.
O, main town road.
P, mark hall, Netteswell neighbourhood.



patterns of circulation

The centre is still the focus of the town's traffic system, but it has been redesigned to give the pedestrian priority over the motor car in the inner core. The plan (below) shows the space pattern.

The north-south dual carriageway road keeps through traffic out of the centre. A roundabout at the south connects up to the two radial approach roads from the south-east and south-west and gives access to the Civic Centre. A roundabout at the north connects up to the east and west roads, railway station and the future motorway on the north.

A secondary north to south road is made on the west side of the centre, but here there is a split 44 ft. carriageway so that there is a close link with the adjacent neighbourhood.

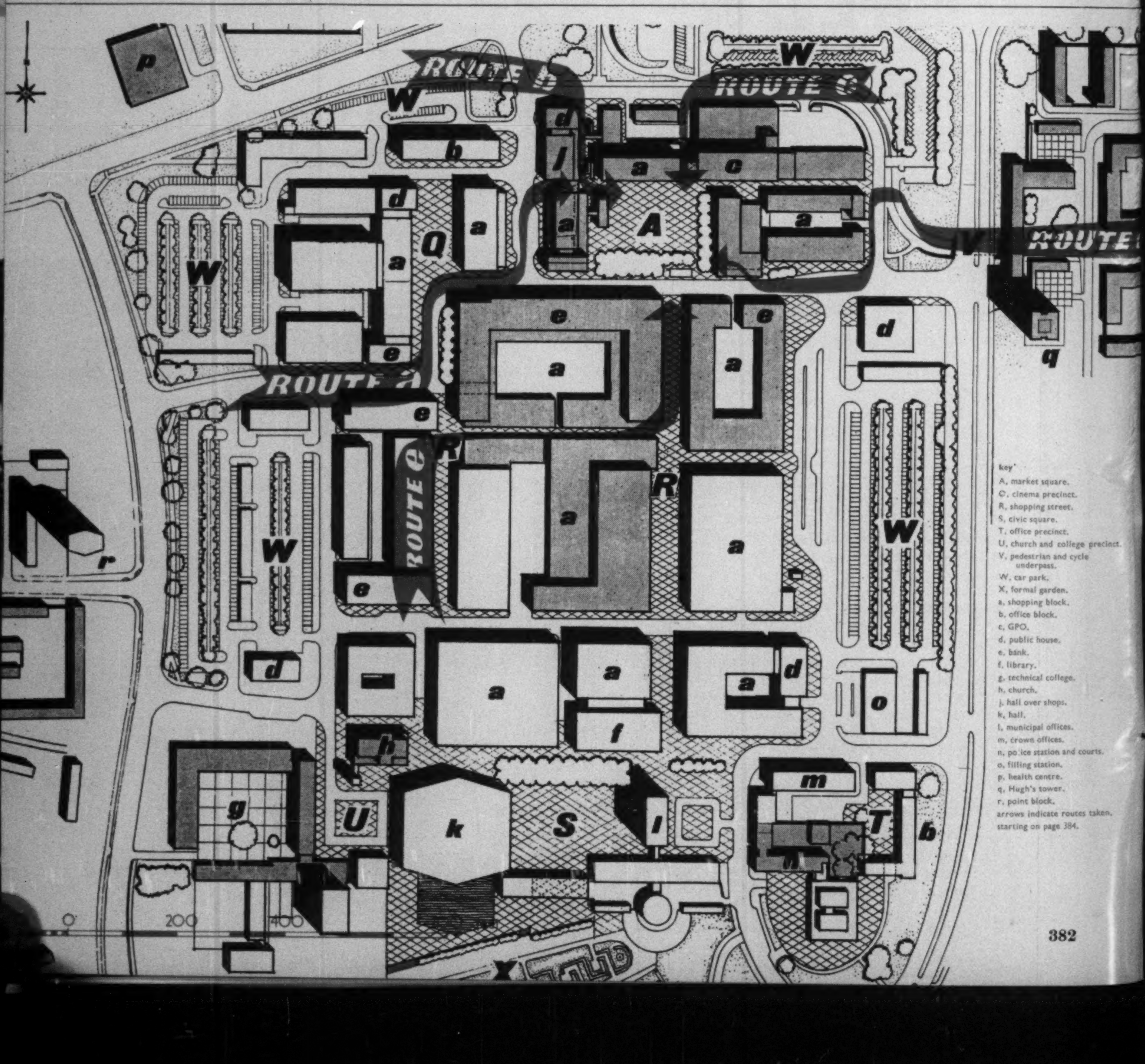
The area thus defined by the main road system is roughly rectangular in shape and of 84 acres. The centre itself turns its back on the roads and looks inwards towards the pedestrian core.

Between the main roads and the centre are broad parking belts connected together by a 30 ft. wide inner periphery road. Numerous pedestrian short cuts connect the parking belts to the inner core. The motorist can thus drive reasonably close to his destination and park without difficulty—one of the reasons for the centre's popularity on market days. The total number of car parking spaces is 2,000 and there is space for expansion. It will be seen from the plan that there are no public parking areas in the heart, the object being to draw off the motorist immediately he leaves the main town road. There is access from the periphery roads to the service courtyards of the various building groups. The service courts apart from giving access to the individual buildings provide parking spaces for tenants' motors and cycles. Buses are excluded from the centre, except on the east side where the bus interchange station is situated on the periphery road where it has immediate access to the heart of the shopping centre: a proposal to site the bus station in the market square was fortunately resisted. The character of this arrangement is entirely different from that of existing towns. Instead of driving between buildings that get progressively denser and denser, one drives rapidly between areas of equal density to arrive at the centre which is seen as an even and compact building mass across an open space. The experience is somewhat similar to coming upon a mediaeval town with its fortifications and moat.

The independent footpath and cycle system designed for the town is linked to the centre by underpasses from the north, south and east. The east entrance is marked by a tall flat block, Hughs Tower, and the cycle track passes under the adjacent three storey flat block. A similar flat block will indicate the west entrance, and that on the north is marked by the tower of the Fire Station.

The underpasses lead into the internal road system on which cycle parks are situated and cycle racks are placed at the entrance to the various pedestrian precincts.

PLAN OF HARLOW TOWN CENTRE WITH COMPLETED BUILDINGS SHADED



key

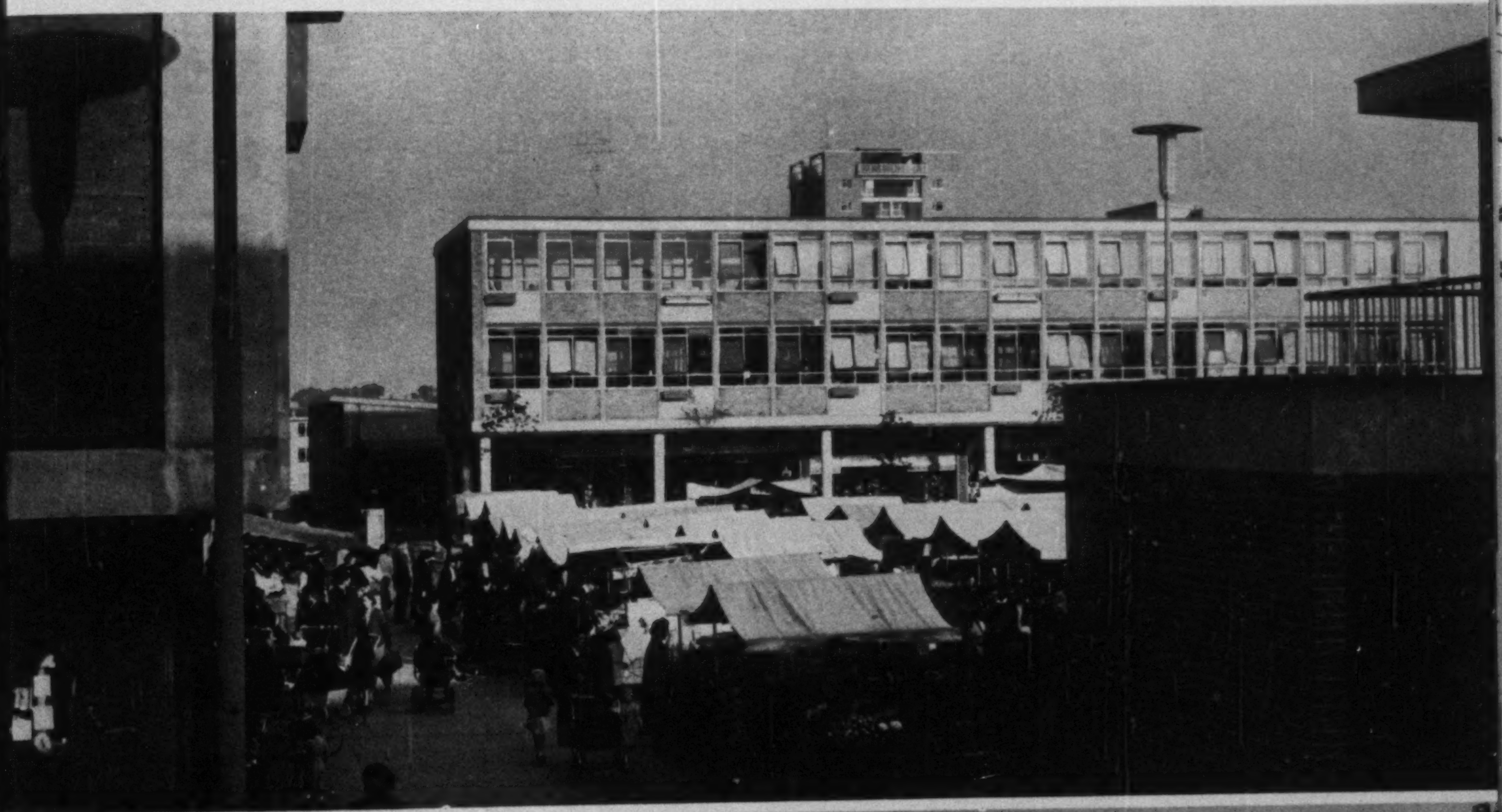
A, market square.
C, cinema precinct.
R, shopping street.
S, civic square.
T, office precinct.
U, church and college precinct.
V, pedestrian and cycle underpass.
W, car park.
X, formal garden.
a, shopping block.
b, office block.
c, GPO.
d, public house.
e, bank.
f, library.
g, technical college.
h, church.
j, hall over shops.
k, hall.
l, municipal offices.
m, crown offices.
n, police station and courts.
o, filling station.
p, health centre.
q, Hugh's tower.
r, point block.
arrows indicate routes taken, starting on page 384.

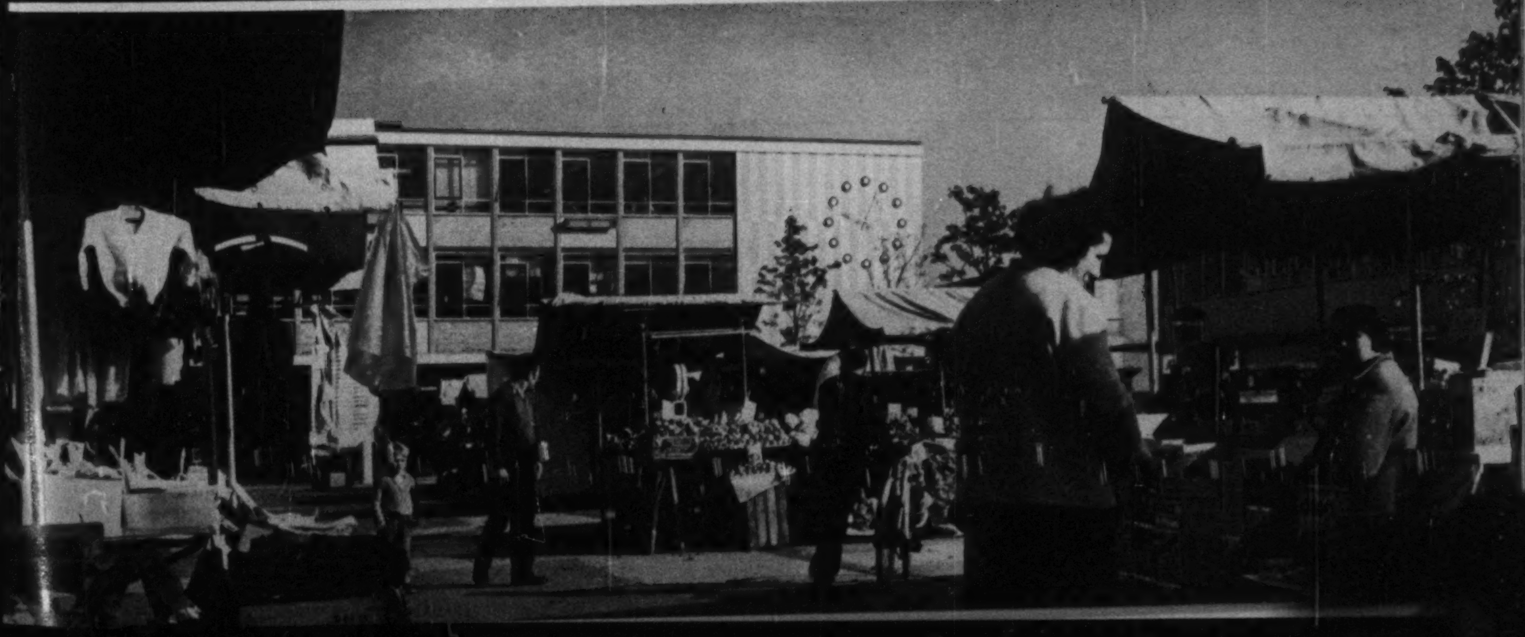
Harlow: General Manager, B. Hyde Harvey. Architect-Planner, Frederick Gibberd. Executive Architect, Victor Hamnett. Chief Engineer, O. W. Gilmour.

The following architects worked on the town centre: Senior Architect, A. J. McCowan. Architect-in-Charge, H. Tikten. Assistant Architects: D. S. Roberts, D. G. Fenter, W. G. Reed, J. A. Graham, K. G. Ellis, G. A. Hewlett.

STONE CROSS MARKET
THE HIGH

Stone Cross Market, Harlow, was not completed until almost a decade after work on the town began, and adjoining areas of The High are still incomplete. The general principles of town design are still, broadly, those described in the ARCHITECTURAL REVIEW for March 1948, but modified in the direction apparent in a further article in May 1955. By that time a clearer view of performance and usage in such areas had been gained through the trial run at the Stow neighbourhood centre, and although the delay in building the main centre had imposed short term hardships on the early inhabitants, they have been rewarded, in the long run, by a more subtle and humane design. Also, the town had 30,000 citizens by then, and was becoming an established regional centre, so that from the beginning, Stone Cross Market presented an air of business and bustle. The photographs below show two views of the square on market day. Right, a roadside direction sign.

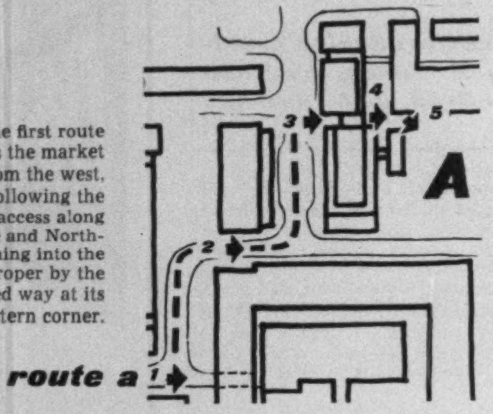


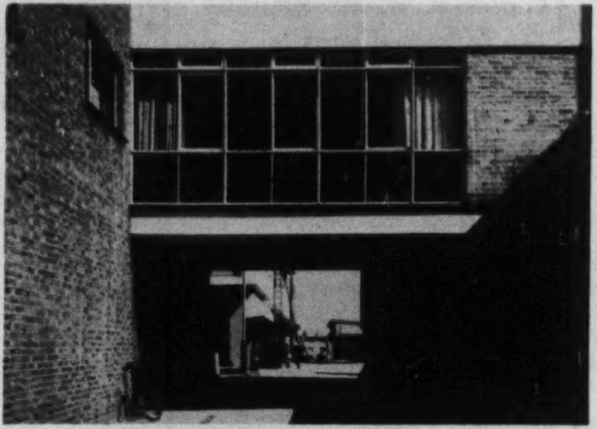


Harlow

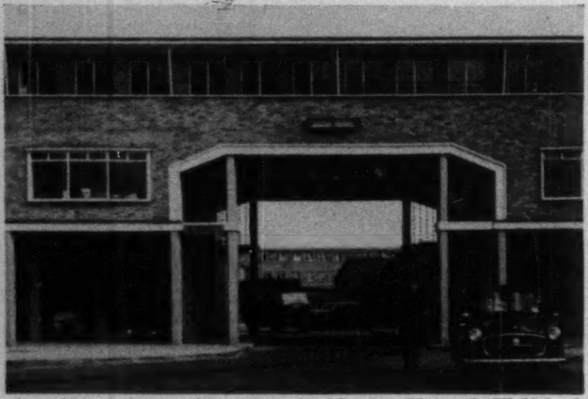
Wheeled and pedestrian traffic penetrates Stone Cross Market (A on each map) along carefully designed routes, which are explored on the following pages.

The first route approaches the market square from the west, first following the vehicular access along Westgate and Northgate, turning into the square proper by the covered way at its north western corner.



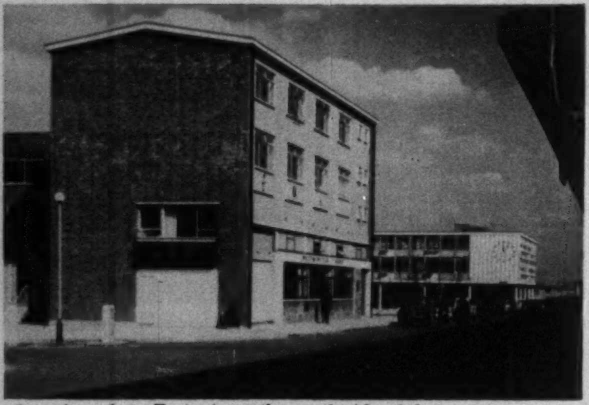


a3, the covered way to the north western corner of the square.



a1, entrance to service court. Architects: Kenneth Wakeford, Jerram & Harris.

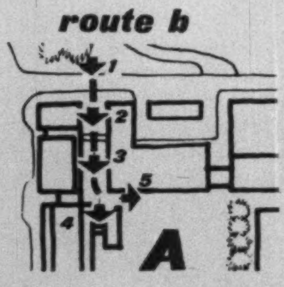
a4, the square as it is first seen, looking straight down Stone Cross.



a2, a view along Eastgate on the south side of the square.

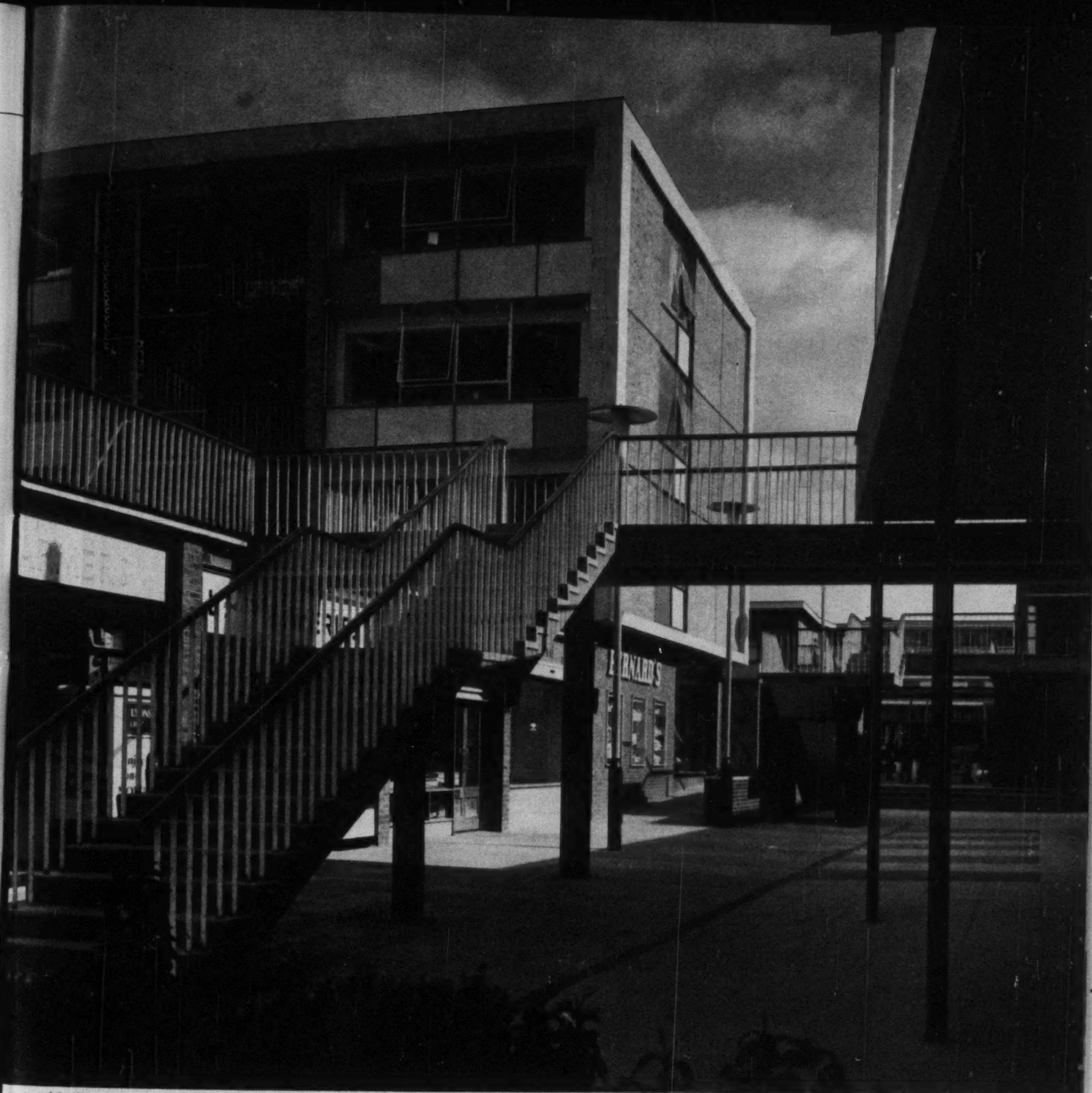
a5, a diagonal view across the square to the clock.

The second route enters the square by way of the precinct of local shops, from the north, next to the Painted Lady public house, and at the point of maximum three-dimensional interest, where stairs lead up to the high level galleries.



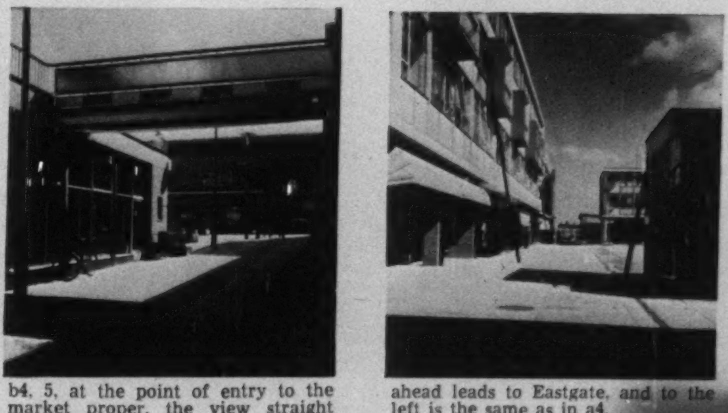
b1, view from the Fourth Avenue cycle park.

RESTAURANT



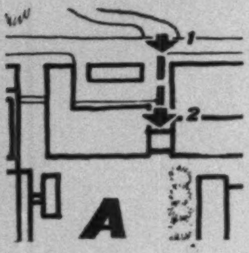
b2, the stairs up to the galleries, between the Painted Lady and the back of Market House.

b3, between the two sets of stairs, with steps up to the main market level beyond.

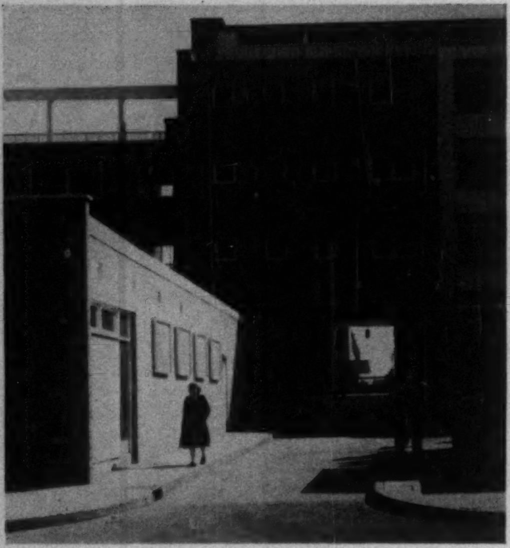


b4, 5, at the point of entry to the market proper, the view straight ahead leads to Eastgate, and to the left is the same as in a4.

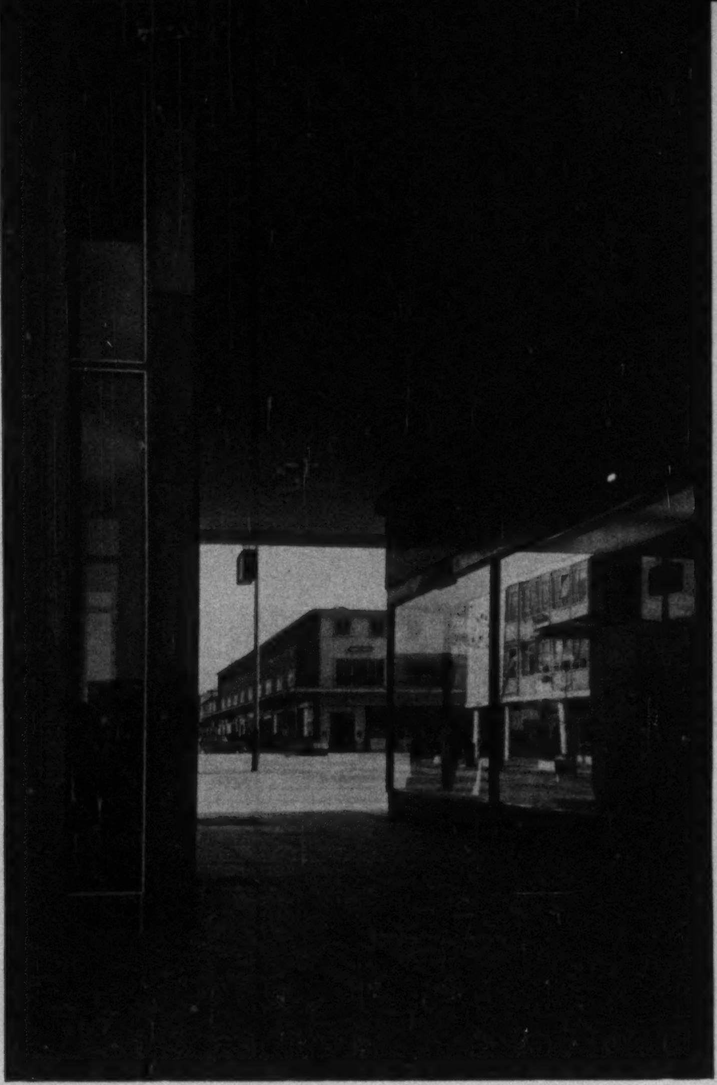
route c



Pedestrians and cyclists coming to the market square by the main underpass below Fourth Avenue are delivered directly to the entrance that debouches near the north eastern corner, in line with Broad Walk.

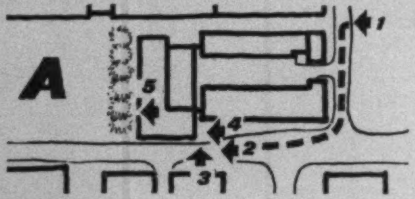


c1, the back of Market House seen from the service road that rings the square on the north.

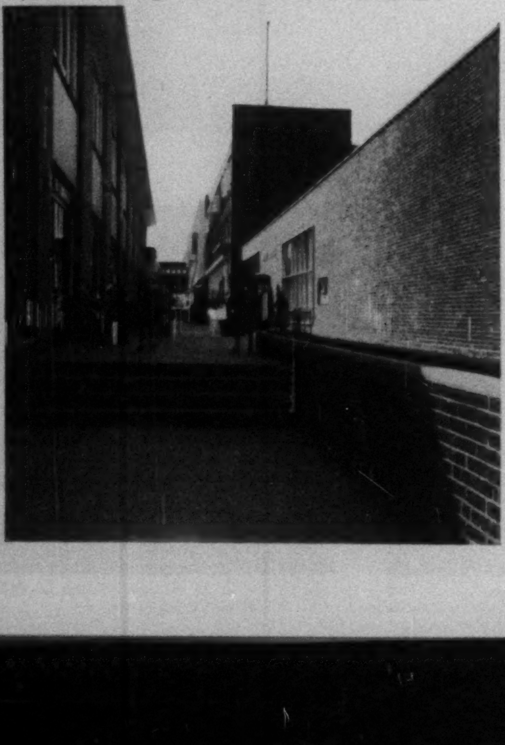


c2, the entry to the square, with shops at the corner of Eastgate and Broad Walk beyond.

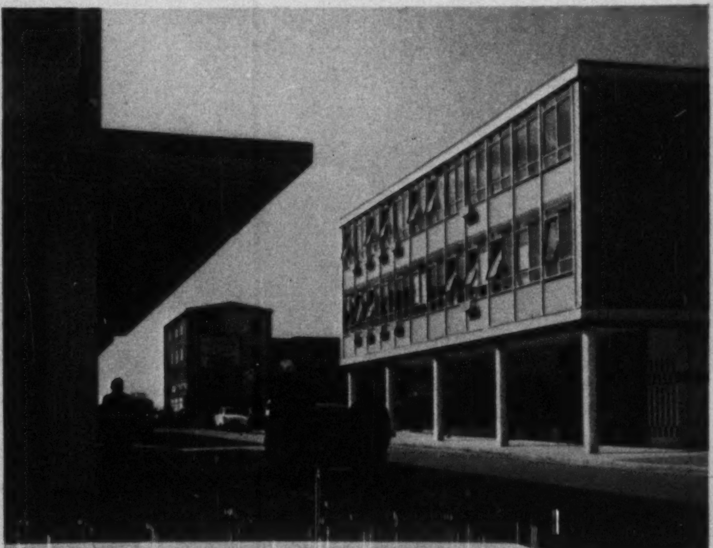
route d



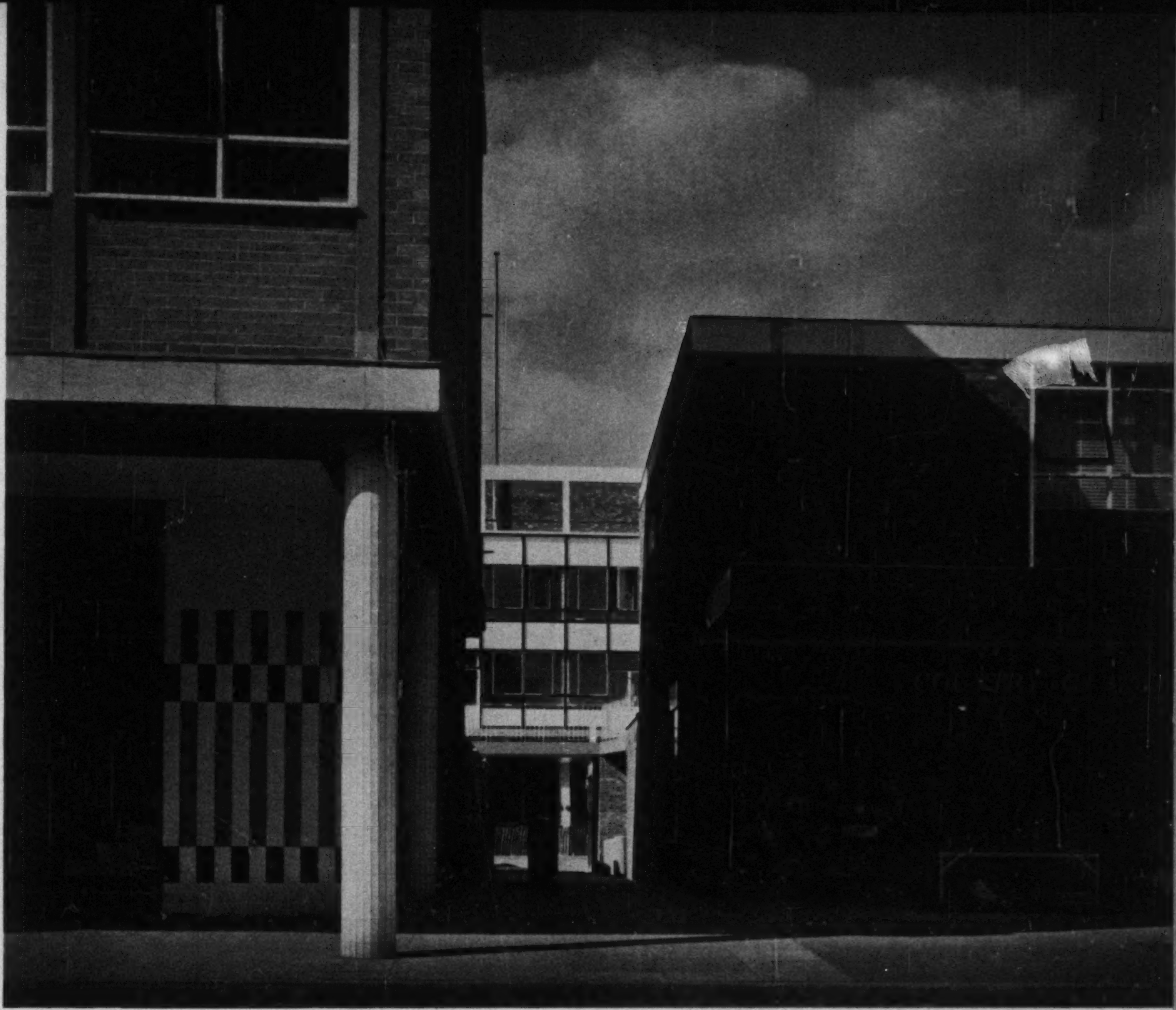
d1, the view along Stone Cross toward the market.



The approach from the east, under Central Avenue, offers two lines of entry to the market; either along Stone Cross, past the Post Office, entering by the north east corner, or to the south, along Eastgate, entering the square under the clock on Adams House.



d2, Eastgate, from the corner of Terminus Street (the bus station), with Adams House at at the right.



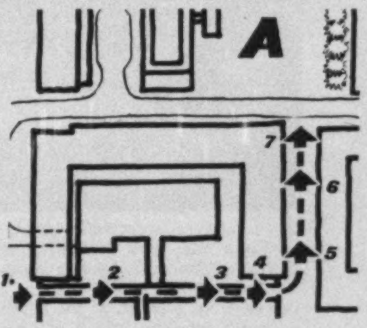
d3, the narrow walk from Eastgate to Stone Cross down the side of Adams House.

d4, the view along Eastgate from the east.

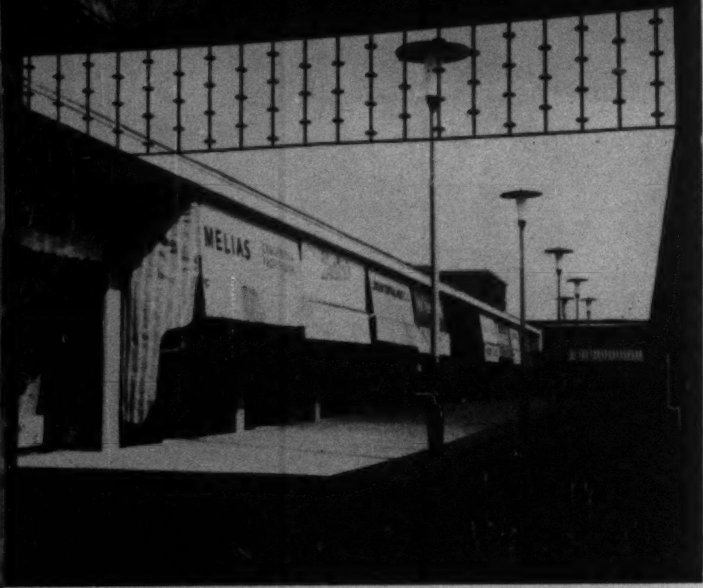
d5, the square seen from under the corner of Adams House, looking toward the galleries and stairs at the north-western corner.

An alternative route of approach from the west and south is provided by Little Walk, a narrow shopping precinct that traverses the centre of the High and then northward along Broad Walk.

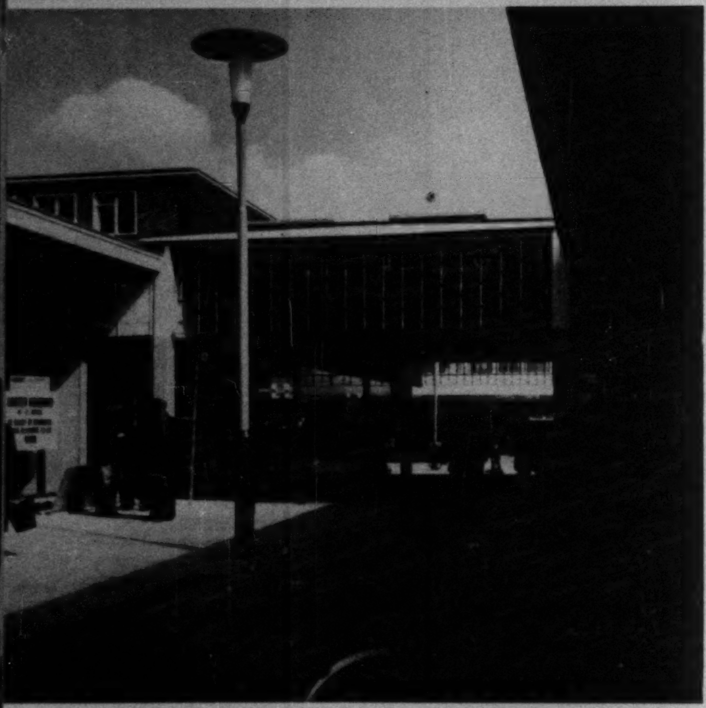
route e



e1, the covered entrance to Little Walk from the west.



e2

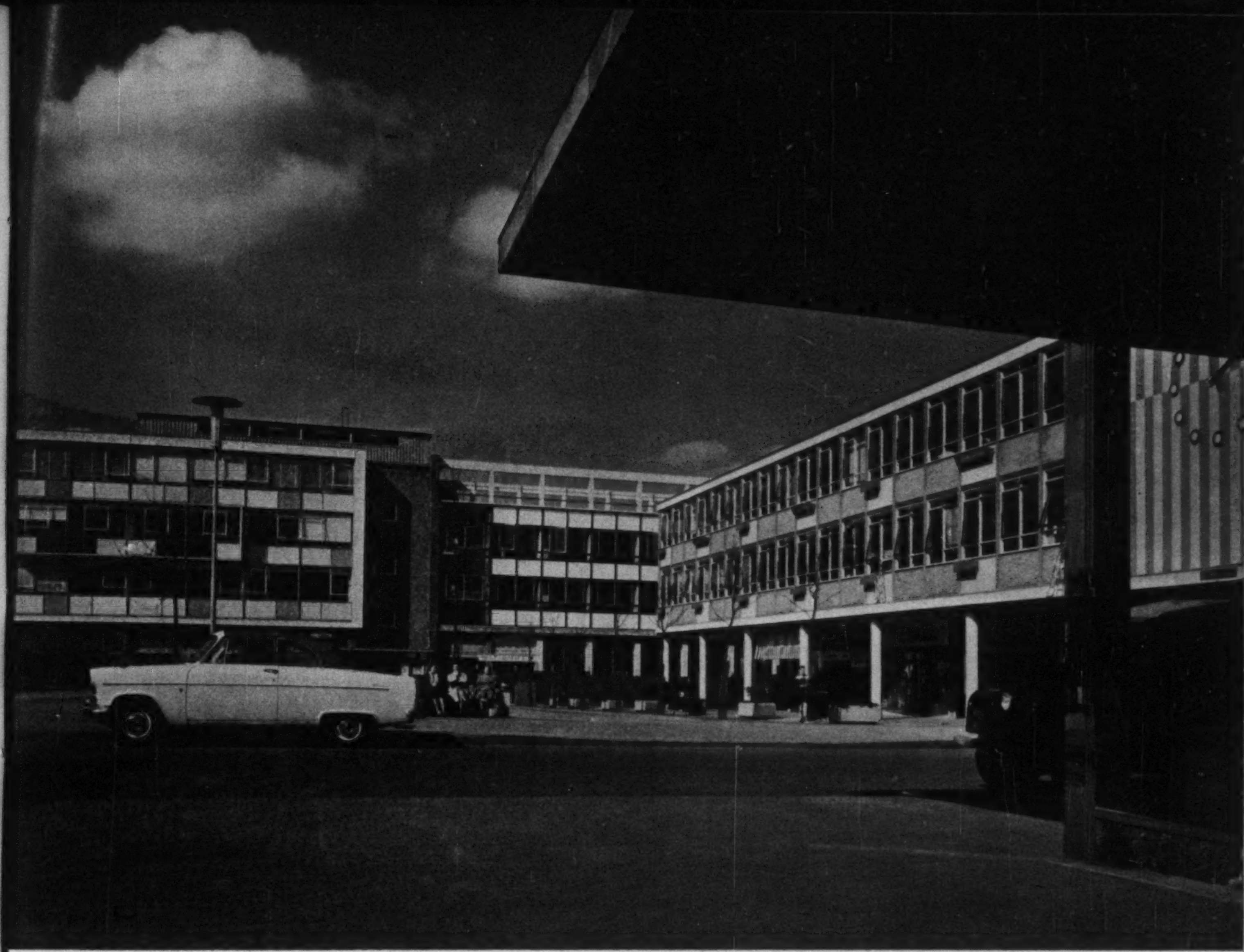


e3

e4

e2, 3, 4, left, progression along Little Walk and under the portico at its eastern end. Although the Walk is neither roofed over nor gated at the ends, the effect of these two porticoes is to make a 'little world' with its own scale and character as surely as if it were the Burlington Arcade—buildings designed by Kenneth Wakeford, Jerram & Harris.

e5, 6, above, progression along Broad Walk toward its northern end, with a view of Stone Cross Market across Eastgate. The scale here is comparable to the Lijnbaan in Rotterdam, with canopied shops along either side, but there has been no attempt at the Lijnbaan's regularity and standardised detailing, and it will be seen that the canopies on either side are of different design; the block on the right was designed by Seymour, Harris & Partners. The view from the end of the Broad Walk into the Market Square is shown at the top of the facing page.



e7 Stone Cross Market seen from the end of Broad Walk, with Market House, left, the Post Office, designed by Eric Bedford, Chief Architect to the Ministry of Works, centre, and Adams House, right.

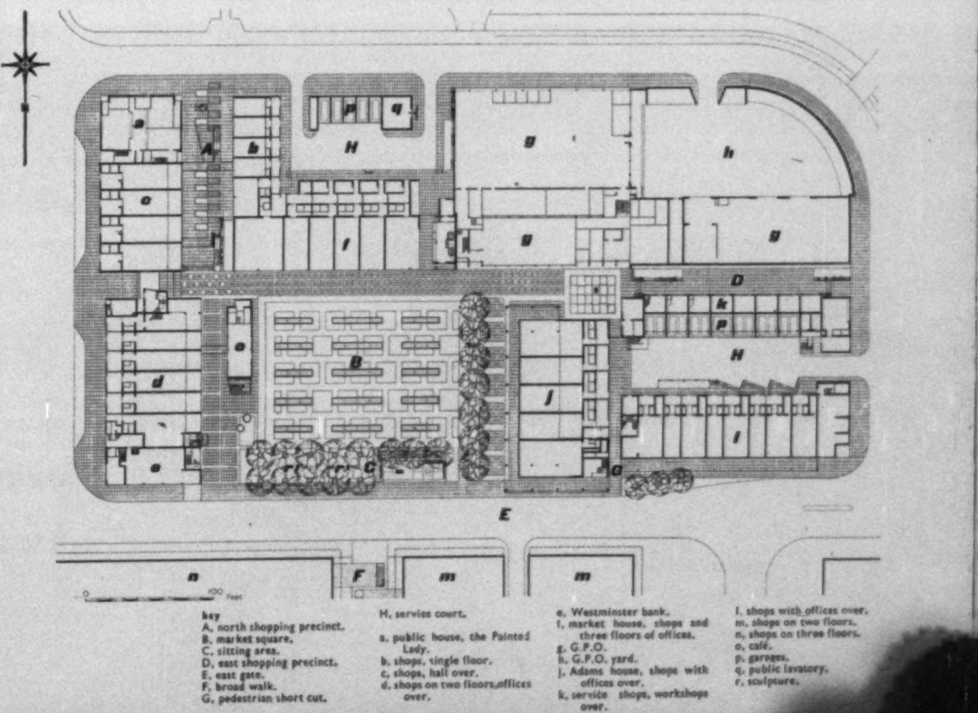
The Market Square (plan right) is a large rectangle 250 ft. by 220 ft. on an east to west axis. A road (East Gate) passes across its southern boundary to give vehicular access for setting up the stalls and to provide an internal cross connection, thereby freeing the rest of the market place and the adjoining precincts for pedestrians. The view into the Square down East Gate is narrowed by building over the pavement, and the view out of the Square on that side is closed by Hughs Tower.

The long northern side of the Square, Market House, is four storeys high, the other two sides being three storeys only. The southern façade of the square, across Eastgate, is broken by the entrance to Broad Walk, giving a visual extension of the Square into the principal shopping street. Openings through the other three sides of the Square are either at ground level or are masked at the corners so that the walls around the Market place appear to be continuous and the space is given greater definition, while the narrow openings through precincts entering the Square prevent it from being draughty and give spatial contrast and surprise to the shopper entering the Square from the adjacent parking belts.

One side of the principal entrance to the Square from the north, through the narrow

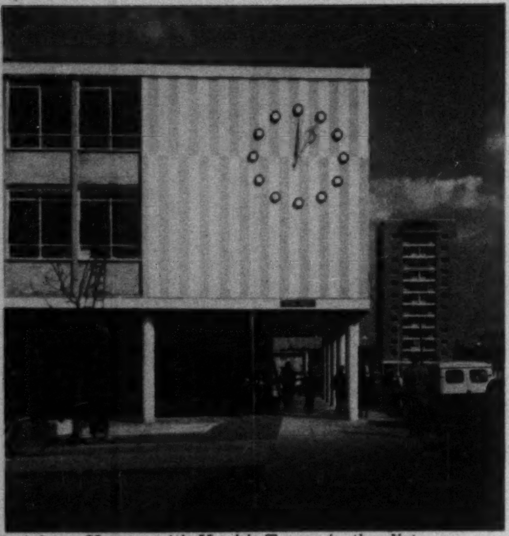
[cont. on page 391

MARKET SQUARE (ground level)



key
A, north shopping precinct.
B, market square.
C, sitting area.
D, east shopping precinct.
E, east gate.
F, broad walk.
G, pedestrian short cut.
H, service court.

a, public house, the Painted Lady.
b, shops, single floor.
c, shops, hall over.
d, shops on two floors, offices over.
e, Westminster bank.
f, market house, shops and three floors of offices.
g, G.P.O.
h, G.P.O. yard.
j, Adams house, shops with offices over.
k, service shops, workshops over.
l, shops with offices over.
m, shops on two floors.
n, shops on three floors.
o, café.
p, garages.
q, public lavatory.
r, sculpture.



1, Adams House, with Hugh's Tower in the distance.

3, above the confusion and bustle of the market, the regular grid of the front of Market House makes a background of order.

2, the market face of Adams House, with shops below.

4, a view through the central alley of the market emhasizes the planned manner in which the competitive cstentation of commerce, in both permanent and temporary buildings, stops at first floor level.

cont. from page 389]

shopping precinct, is extended to form the west side of the Square and the need for first-floor shops and a meeting hall gave an opportunity to form a first-floor terrace. Since there are no problems of building lines in a new town, the terrace is extended to form an outdoor drinking space for the Pub and a further space for outdoor refreshment is provided by the flat roof over a café.

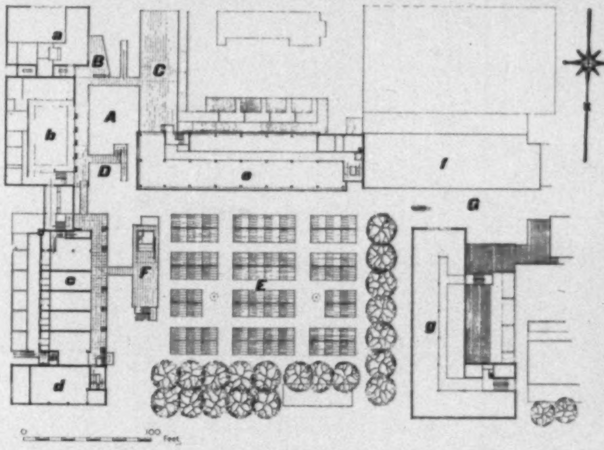
There are two shopping parades of a special character: the first floor terrace overlooking the Market Square and the east precinct, part of Stone Cross proper, adjacent to the Post Office. The first-floor terrace is for shops in which window display is not of paramount importance — hairdressers, oculists, photographers, and the east precinct is for 'service shops', that is shops with a small ground floor area with a large workshop over for making and mending.

Shopfronts have been treated as part of the window displays, and no restriction was placed on their design except where they were so bad that it was thought that other shopkeepers might object. Definition is given to the shopping views and distinction from the general architectural scene by projecting canopies or by recessing the shop frontages in arcades—the horizontal plane puts the lid on the ground floor design.

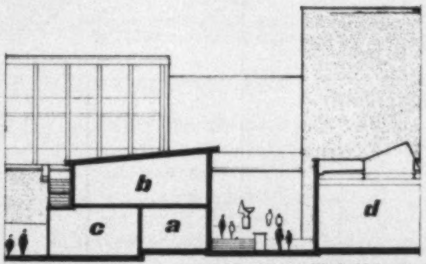
The market space itself is a sub-division of the main space 160 ft. by 120 ft. It is

[cont. on page 392

MARKET SQUARE (upper level)



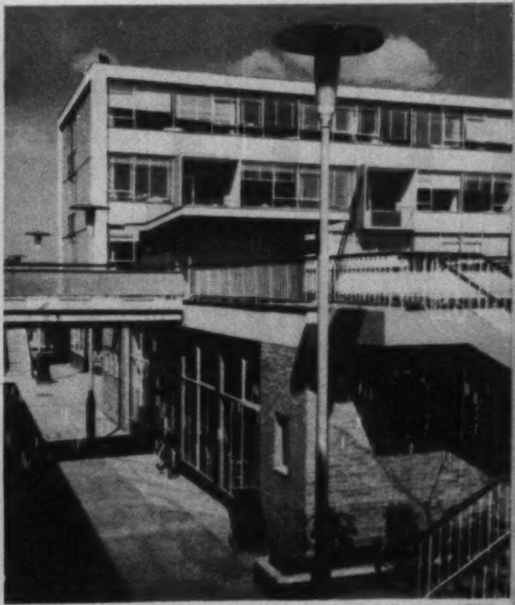
key
A, north shopping precinct.
B, Painted Lady terrace.
C, roof terrace.
D, bridge.
E, shopping parade.
F, café terrace.
G, east shopping precinct.
a, Painted Lady restaurant.
b, Stone Cross hall.
c, shops.
d, upper part banking hall.
e, market house offices.
f, upper part G.P.O.
g, Adams House offices.



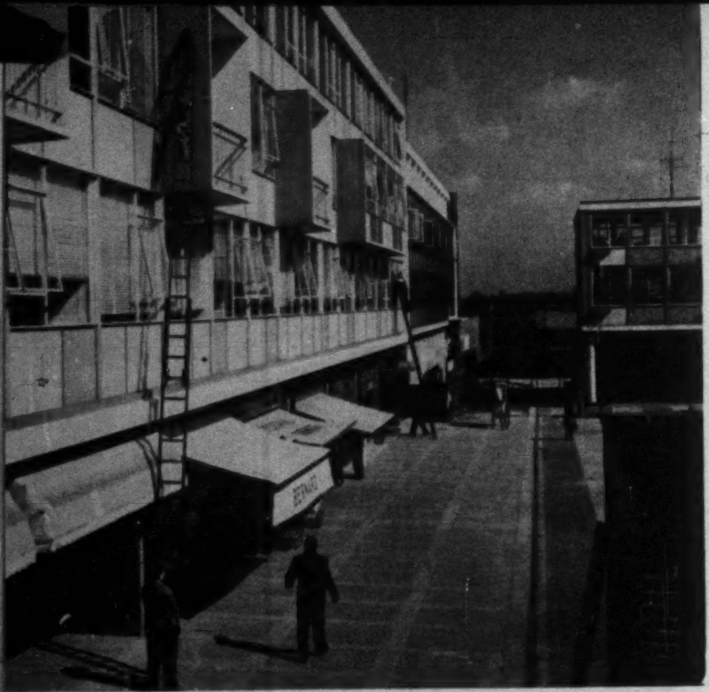
Section through east shopping precinct (D on plan on p.389), looking west.

key
a, service shops.
b, workshops to service shops.
c, garage.
d, G.P.O.

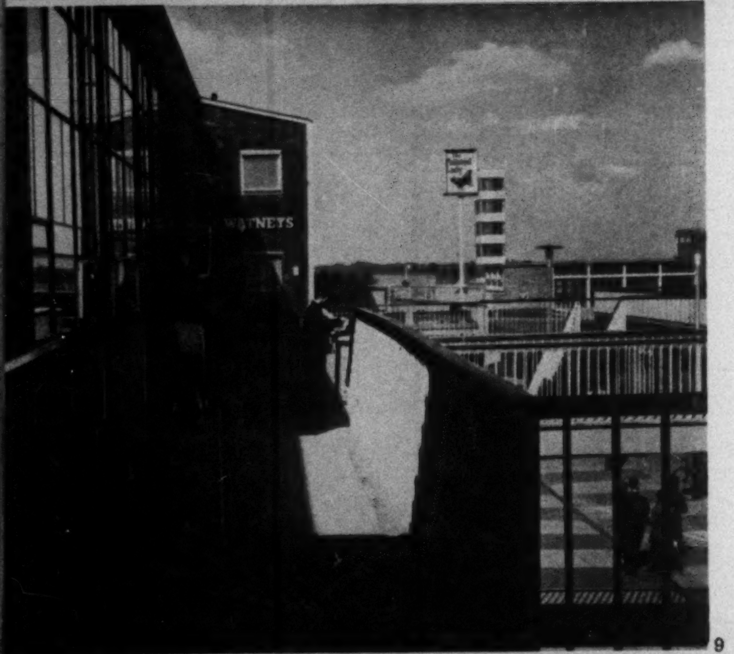
5, one of the pair of staircases up to gallery level between Market House and the Painted Lady.



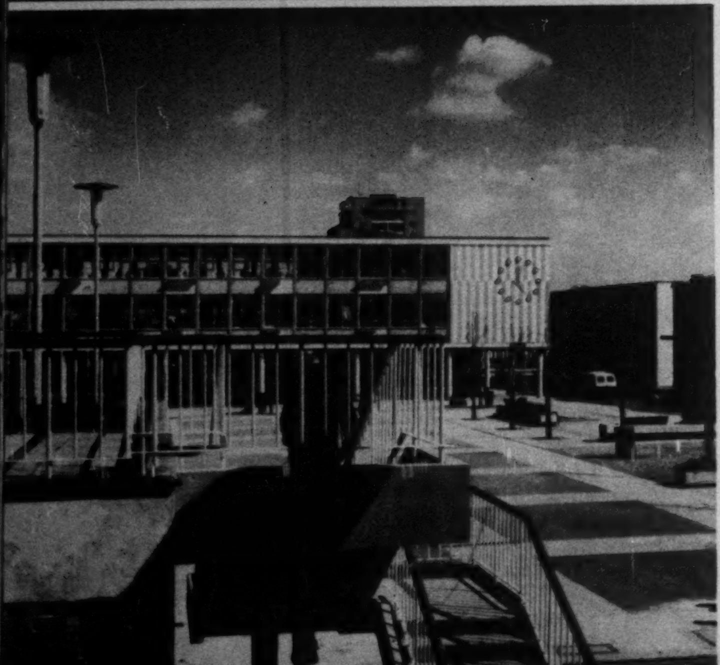
6, view northward from the upper gallery of the Rows, towards the tower of the fire station, designed by Harold Conolly, the County Architect. 7, staircase, roof-terrace and access bridge of the restaurant.



8

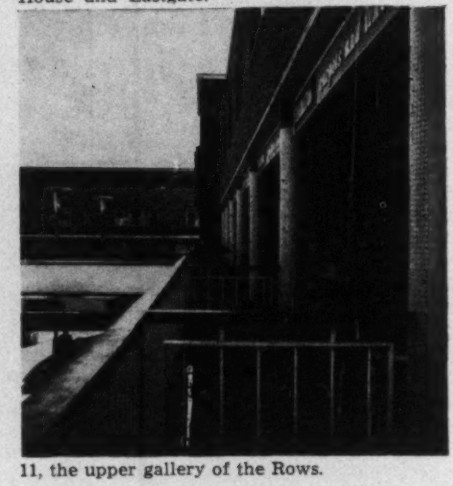


9

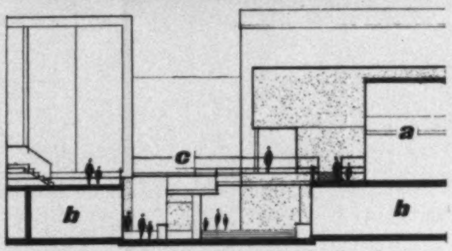


10

8, looking along Stone Cross from the upper gallery of the Rows.
9, the pedestrian bridge leading from the Rows toward the Painted Lady, at gallery level.
10, the stairs at the end of the restaurant, looking toward Adams House and Eastgate.



11, the upper gallery of the Rows.



key
a, Stone Cross hall.
b, shops.
c, bridge and terrace.

The section looks south down the north shopping precinct (A on plan on page 387), and shows the upper gallery of the Rows.

cont. from page 391]

formed by belts of trees on the south and east sides and by the café on the west. These have further formal uses; on the east the trees form an avenue to the main entrance of the Post Office and the short cut to the car park; on the west the café is placed so that it extends the north precinct into the Square itself; and on the south the double row of trees help to form a sitting area, out of the bustle of the Market Square. There are sub-divisions of the sub-division. Thus a portion of the sitting area opposite Broad Walk is partially enclosed by low stone walls to contain a bronze sculpture group some twelve foot high now being made by Ralph Brown.

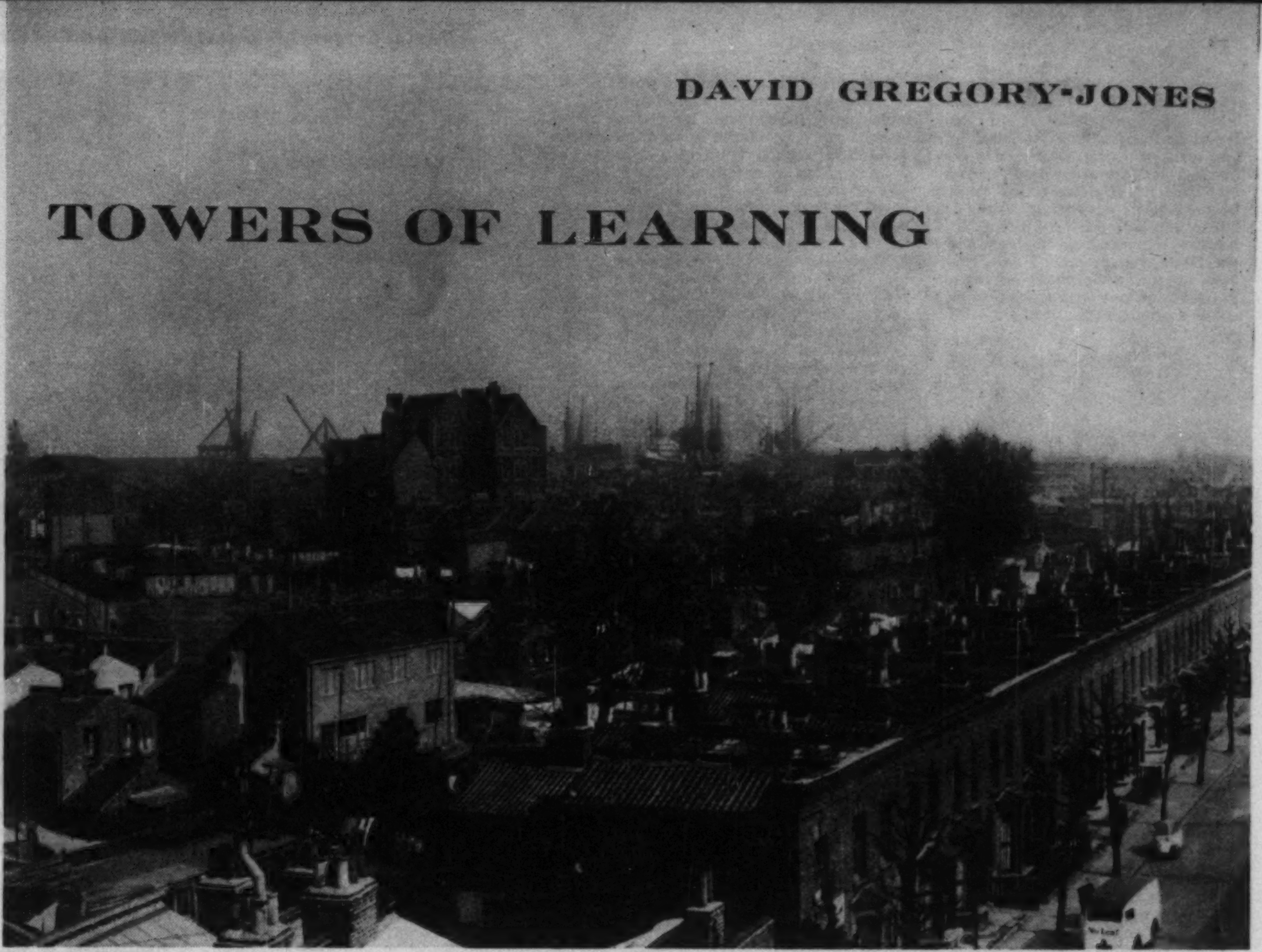
There are from fifty to sixty market stalls, the majority being 8 ft. by 3 ft. of tubular metal construction designed so that they can be folded and wheeled away, and covered with yellow or orange canvas awnings. The stalls are laid in parallel series to form aisles across the square and the awnings are designed so that rain runs down between the aisles and not, as is usual, on to the shoppers in the aisles.

The paving patterns have been worked out to express both the character and function of the spaces, thus in Broad Walk the regular paving pattern that reflects the character of the parade is broken by diagonal lines at the intersection of the cross precincts.

There is an over-all design for advertising; apart from utility objects like refuse bins, cycle racks and lamp standards, there are seats, flower boxes and sculpture being provided by the Harlow Arts Trust.

DAVID GREGORY-JONES

TOWERS OF LEARNING



Ever since Sherlock Holmes, travellers on the high railway viaducts of London have noticed, towering bulkily above the two-storey rows of workers' cottages, the red brick Board Schools, like the one at Rotherhithe, above. In the article below, Mr. Gregory-Jones discusses the social aspirations and aesthetic determinations, as well as the financial pressures, that drove the London School Board's first architect, E. R. Robson, to build so high—and so well.

At Eltham, in south-east London, one of the County Council's new Comprehensive Schools, freshly completed, stands like a friendly castle above the luxuriant gardens and red tiled roofs of surrounding suburbia. Consciously or through force of circumstance the architects of this school have brought up to date a tradition in civic design powerfully established in the Board schools of the last century. E. R. Robson, the first architect to the London School Board and the designer of dozens of these schools, quite specifically intended them to be landmarks in the urban scenery, dominating their surroundings and expressing the aspirations of their age in the same way as the spires of mediæval England had done. Restricted sites may indeed have driven him to build up, but the use of every architectural means at his disposal to intensify the effect of height was quite deliberate: windows were tall and narrow, steeply-pitched slate roofs were furnished with multitudes of lovingly elaborated gables, turrets and soaring fluted chimney stacks, while storey heights were pushed to the 'maximum necessary.' The reasoned deliberation with which Robson emphasized the height of these schools is characteristic of his approach to architecture. In all 'good architecture,' he said, 'there is no vagueness, no indecision, no doing of things by accident, no drifting helplessly from one idea to another. The artist first grasped his building comprehensively as a whole, with a clear definite intention of what he meant to say . . . and he conveyed his meaning and purpose on the face of his work, every moulding and member, window and door architrave, cornice and sculpture being, in his hands, so many opportunities for proclaiming his intention.'

E. R. Robson was born in 1837, in Durham, of which his father had been three times mayor. He worked for three years at the bench to gain some practical knowledge of building construction before becoming a pupil, first of a local architect, then of Sir George Gilbert Scott. Scott's office was one of the breeding grounds of that reaction against strict revivalism of which Robson's own work was such a good example. Working there with him were Bodley and Garner, later to be the designers of the London School Board offices on the embankment near Cannon Street Station, Graham Jackson, whose work at Oxford University and elsewhere has the stylistic freedom if not the vigour of Robson's board schools, and J. J. Stevenson, designer of the Red House in Bayswater Road, 1—built eight years after its namesake in Bexleyheath and likewise one of the pioneer buildings in the late nineteenth century movement that was to place English domestic architecture at the head of the world.

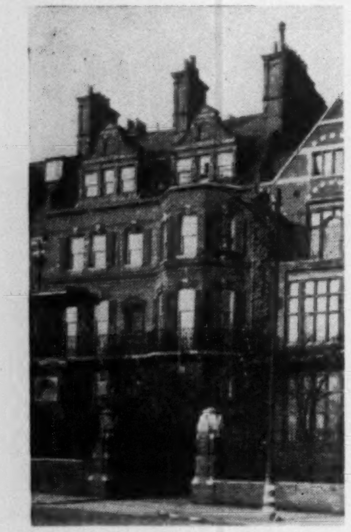
Robson's first important appointment was in his home city where he was for six years architect to the Dean and Chapter of the Cathedral. He restored the central tower, and is reputed to have frustrated Gilbert Scott's ambition to give it a steeple. From here he moved to Liverpool where he was surveyor to the Corporation for seven years. The only work issued under his signature at Liverpool that the author has seen is the Municipal Offices, 2. A contemporary describes the style as 'Corinthianesque, treated freely'—and very horrid it looks too. While at Liverpool Robson was forbidden, under the terms of his contract, to undertake private work. He insisted on being freed from this restriction when he took up his post as Architect to the London School Board, and ran a considerable private practice at the same time as he was pushing through a huge programme of school building.

This is where J. J. Stevenson returns into the picture. Soon after Robson's appointment the two architects entered, for a short period, into partnership. Although Stevenson had no official connection with the School Board, he claimed in his book *House Architecture* that he had been responsible for the design of a few of the earliest board schools. Robson, however, according to his son, stated that he had been 'occupied often in the afternoons rubbing out what John (Stevenson) had done in the mornings.' Taking into account both the character of Robson's earlier work at Liverpool and the fact that Stevenson's house in Bayswater Road had been designed in a close forecast of the so-called Queen Anne style developed in the board schools, it does seem likely that Robson owed a great deal to his partner and that the remark just quoted was made in a rather disgruntled mood.

The London School Board was established in 1870 following the passage of Forster's Education Act. Among the earliest members of the board was Edwin Chadwick who took his duties sufficiently seriously to write a long report on the construction of schools, in which he suggested a system of hollow interlocking concrete blocks for walls and floors with 'iron uprights and ties on the Crystal Palace principle.'

After a preliminary period during which buildings were hired for use as schools—we read of warehouses and a rice mill being adapted—the board

embarked on a big programme of school building in 1872. Robson had been appointed Architect to the Board in the previous year, but at first his duties were concentrated on research and site acquisition. It had been hoped that suitable sites could be acquired by advertising for them, but in fact only one very unsatisfactory site was bought in this way, and the board was embroiled from the first in the complexities of compulsory purchase orders, arbitration, compensation and the like.

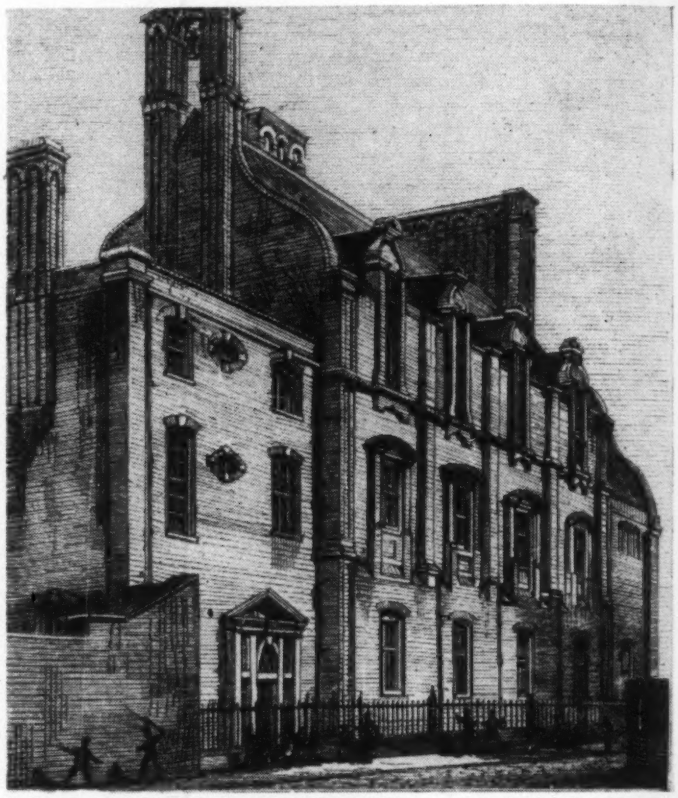


1, *the Red House, Bayswater Road, by J. J. Stephenson.*

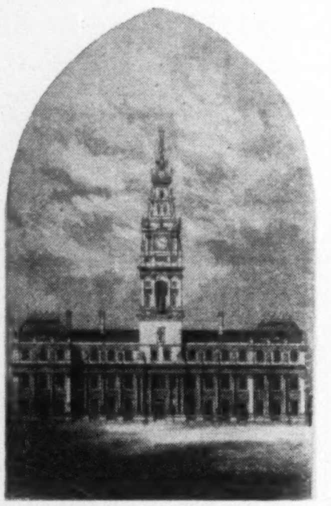
The first thirty schools erected by the board were all designed in competition. Six different architects were invited to compete in closed competition for each single school, the only reward offered being to the winners who got the job together with their normal five per cent fee. Consequently by August 1872, the board had at its disposal the ideas of 180 architects on the subject of school design. Out of all these schools designed in competition only one gave a foretaste of the future. Its architect was Basil Champneys and it used to stand in Harwood Road near Eel Brook Common in Fulham, 3. It was opened in November, 1873. Its plan was elementary—three superimposed schoolrooms each with a single attached classroom—but its architecture was advanced, and it can claim the distinction of being one of the very earliest schools designed recognisably in the 'L.S.B. style.'

In a talk given in Liverpool in 1888, Champneys gave his opinion as to the principles of limitation which architects might adopt if they were to bring a little order into the chaos of contemporary building. He wished architects to make their work as English as possible, as simple as possible and to abjure unwholesome efforts for originality—'at a premium in the present age of keen competition.' These principles had been firmly observed in the Harwood Road school. Its originality was of the unforced kind in which use is made of a traditional language to say new things. It was strongly national in style, being derived from the early period of the Renaissance, which, in England as in all the countries of northern Europe, assumed marked individual characteristics.[1]

The style of Champneys' own work at Newnham College, Cambridge, built a good fifteen years later, was forecast in every respect in his Harwood Road school. Thus, at a date when working class tenements were still of the most institutional grimness—the Peabody Trust had been at work since 1861, and it was to be a full quarter of a century before the LCC architects would be bringing some humanity into housing—elementary schools were being built that not only compared with contemporary buildings for the bourgeoisie in their architectural quality—educational standards, space standards, provision of playing fields, etc., were a very different matter—but which led the way in their architectural style. What the London School Board did in the 'seventies Oxford and Cambridge did in the 'nineties. This may well demonstrate the importance which ruling circles attached to education—in particular to the need for improved educational standards among the workers in British industry—but it is also a tribute to the determination of the Board, subject as it was to continual sniping on account of supposed extravagance, and to the vision and drive of its architect.



3, *Harwood Road School, Fulham, designed by Basil Champneys, opened in November* 1875. *The first clear demonstration of the main elements of the Board School style—red-brick revival of seventeenth century vernacular detailing, most of it placed high on a compactly designed block.*



2, *the Municipal Offices, Liverpool.*

In common with many of the younger architects of the mid-'seventies Robson was thinking along the same lines as Champneys. 1873, the year during which the first schools erected by the L.S.B. were opened, also saw the completion of Norman Shaw's New Zealand Chambers, 4: the year was described by *The Architect* as 'the first . . . of the Queen Anne revival,' which it deplored, particularly as expressed in 'several of the schools (of the L.S.B.) which show what the style can descend to when limited to simplicity and severity.' It is, of course, partly the 'simplicity and severity' of these buildings which appeal to us today. But their qualities are rooted in something more solid than a mere reflex action dictated by the need for economy. Unlike much contemporary work in the 'Queen Anne' manner, in which charm and elegance appear as the most sought-after qualities, these early board schools have a weight and a seriousness that set one in mind of the work of Philip Webb (or even of Berlage). This weight and seriousness is partly an expression of Robson's own character—he admired as one of the key qualities in architecture 'rigidity . . . a particular aesthetic quality opposed to easy softness, incoherence or languid beauty, and having for a result the stamping of the work with a vigorous character'—but also follows from his determination to be clear as to his architectural objectives. The style of his schools was not adopted at the dictates of fashion, but after experiment and careful thought as to what the objectives of an architect designing a modern elementary school should be. In his book on School Architecture, published in 1877 and for long a classic on its subject, Robson recorded this thought. After emphasizing that the architect's first job is to understand how his building will be used he then poses the architectural problem as follows.

Schools could not be expensive, and, in London, this meant that they must be built in brick. Nevertheless, they were 'henceforth to take rank as public buildings . . . planned and built in a manner befitting their new dignity,' and they should have an architectural character that was immediately recognizable as their own. What was to be the content of this new architectural expression? 'It is clear that a building in which the teaching of dogma is strictly forbidden can have no pretence for using with any point or meaning that symbolism which is so interwoven with every feature of church architecture as to be naturally regarded as its very life and soul. *In its aim and object it should strive to express civil rather than ecclesiastical character*. A continuation of the semi-ecclesiastical style which has hitherto been almost exclusively followed in England for National Schools would appear to be inappropriate and *lacking in anything to mark the great change which is coming over the education of the country*.' If the Gothic revival architecture of previous Victorian schools was to be abandoned as inappropriate what was to be put in its place? Was it necessary 'to abandon all indigenous architecture and to seek something wholly new or "original"?' (It is interesting that this concept should occur at all to a mid-Victorian architect. Robson may have been thinking of the sort of 'non-period' ornament used by Digby Wyatt at Paddington Station, for instance.) Robson did not think it was necessary to abandon tradition: 'History shows that, in all previous cases, new wants have been met by new developments of the—prevalent manner of building. Our difficulty lies in the fact that, considered as a vernacular or universally-practised art, architecture has not had a being for many years and there is, consequently, no prevalent architecture of good type from which to develop.' The causes of this decline of architecture as a vernacular art lie in the operations of the 'speculative builder whose soul is occupied by the scale of rents which he can extract from his scantily-built mansions,' in the 'ill treatment of the builder's workman' and the consequent 'lack of sympathy between him and his employer' that has 'too often erased the instincts of good workmanship' and, lastly, in the decadence of 'the old spirit of unity' not only in the building industry but among the architects, who, 'from having a wholesome rivalry in the same direction' have come to 'wage a war of different and conflicting styles.' Robson's aim,

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[1] Robson, while condoning Champney's use of brick because of the adjoining common whose greens showed it off to advantage, was critical of the use of red brickwork in London. He considered that yellow London stock brick, being less pervious, stood up better to the London climate, and consequently built his schools principally in this material with red brick only used—along with stone—in dressings and decorations. Interpretation of what had been a monochrome style in terms of a variety of materials gave Robson's schools their starting point of individuality—though it should be said that Robson more than once urged 'the cultivation of an eye for colour' on his fellow architects, so that the structural polychramy of his schools derived from a more positive aim than weather resistance alone. Experience showed that even the limited use of soft red brickwork in moulded ornament was unwise: much of this work in the earlier schools is now eroded beyond recognition by atmospheric pollution. It is possible to explain the less sympathetic character of later L.S.B. schools by the architects' attempts to find materials appropriately hard and unyielding.

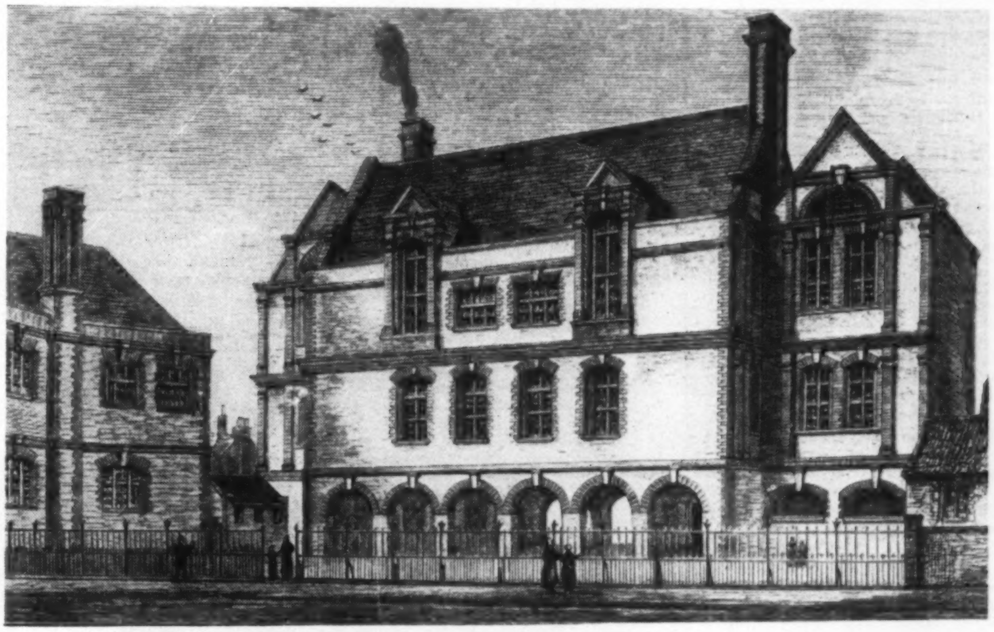
4, New Zealand Chambers, by Norman Shaw.

then, was to look back over history, past the competitive society in which he lived and which had wrought such havoc on architecture, to the most recent period when there had been a truly vernacular architecture that might make a helpful starting point in the design of modern schools. 'The only really simple brick architecture available as a foundation is that of the time of the Jameses, Queen Anne, and the early Georges. The buildings then more nearly approached the spirit of our own time, and are invariably true in point of construction and workmanlike feeling. Varying much in architectural merit they form the nucleus of a good modern style. In looking to the architecture of this period as a basis, a servile copyism need not be attempted, for it may not be impossible to accept its spirit and yet to clothe our rendering with new form and a higher sense of architectural being.' 'Specimens of good and thoughtful brickwork in sufficient number still remain scattered among the old architecture of the city and its suburbs, to form the basis of a good style suited to modern requirements. Hackney and Putney, Chelsea and Deptford all furnish old examples.' The style was not dead: for it was still the preponderant style of London, particularly among the 'plainer and less expensive buildings' which were the intimately known settings for countless lives. Thus adherence to its spirit was not an arbitrary act of style-mongering: As well as arising from a careful analysis of the content to be expressed in the architecture of the new board schools Robson's approach marked a conscious acceptance of the genius loci of London—an act of consolidation in an age of disruption.

After a year's experience of building schools designed in limited competitions the board decided to call a halt: Not only was it becoming difficult to find 'superior architects' who were prepared to compete on this basis, but also continual 5 per cent fees were becoming irksome. It was decided, quite rightly, that now that the initial period of trial and error was coming to an end, the ratepayers would get better value for their money, if Robson himself (who 'had given abundant showing of his qualities') were made responsible for the design of all the board's schools. Robson's salary was raised to the astounding level of £1,000—the fact that he owned a house in the Paragon at Blackheath brings home the dramatic decline in status of even the most eminent salaried architects since those days—and from then until his retirement in 1889, he was personally responsible for every one of the schools erected by the board. Late in 1872 he complained to the Board that, with his present staff of eight draughtsmen and juniors (at £80 to £200 a year) it was only possible to complete the drawings for one school a week, but that if this staff were increased by less than one half its cost output would be doubled. After a great deal of argument the board agreed to increase Robson's staff to fifteen—including two tracers, a clerk and 'a boy at five shillings a week'—and with this force at his disposal he could, by October 1876, point to an achievement of 134 new schools completed with 40 more on the ground or contracted for. Cost of production worked out at about 1 per cent compared to the 5 per cent which private architects had been paid—and at this time there were no consultants, not even clerks of works to be paid in addition.[2] This saving could be almost exactly balanced against the increased cost—5 per cent—of a building of some architectural pretensions over the barest piece of mere construction, as was discovered when the board made a careful study of the economics of architecture in response to complaints by local residents that an unusually plain new school was an eyesore in their neighbourhood. It was decided that, in future, the board must be prepared to pay for good architecture.

This dramatic reduction in costs of production in the architect's office could only have been won by treating the board's work as a programme: plans and detailing were increasingly standardized and there was the minimum chopping and changing of architectural character. By sheer Victorian ruthlessness the L.S.B. achieved a far higher degree of standardization than most education authorities have achieved since the last war. Although the L.S.B. schools vary from very plain building to the greatest elaboration according to the openness of their sites, it cannot be said that, in practice, Robson was over-anxious about tailoring each school to suit its locality. The positive result of this is that these buildings strong in personality, do a very great deal to set a stamp of unified character on the hodge-podge of Victorian London.

Several early board schools were sited in Deptford—a neighbourhood of tough habits in those days, where it was sometimes necessary to give police protection to building workers on the new school sites. It is not surprising that the voluntary school organizations had not penetrated



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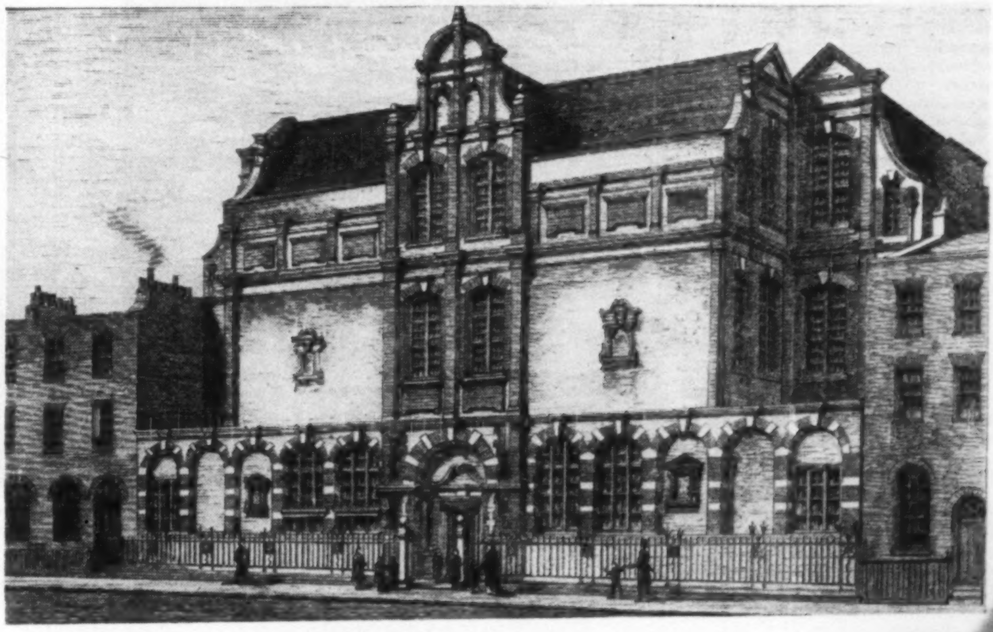

5 and 6, Anglers' Gardens School, above, and Aldenham Street, below, both the work of E. R. Robson, and both opened in 1874. Two versions of the U-plan layout evolved by Robson to accommodate the pupil-teacher system. The open arcading which makes a ground-floor play-space at Angler's Gardens was not feasible at Aldenham Street, where this space was taken up by the infants' school.

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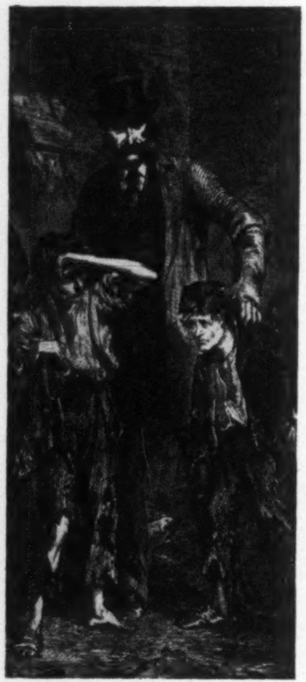
[2] The policy of not employing clerks of works was reversed after the board had lost a law-suit in which Robson had been sued for damages following structural failures due to the use of foundation concrete not of the mix specified. It emerged during the hearing that Robson had been kept so busy in the design of new schools that he had often been unable to visit his sites until the jobs were completed. More was brought into the board's affairs by the clerks of works than efficient site supervision. On at least three occasions in 1876 the formal opening of a new school was enlivened by a choral performance conducted by the clerk of works on the job.

much into the district! The first school of Robson's designing to be completed was in this area, at Creek Road. It was opened in July, 1873. Although it is no longer standing, contemporary descriptions make it clear that it was very similar in planning and appearance to the two schools at Anglers Gardens, 5, and Aldenham Street, 6—both opened in August, 1874—which are illustrated.

These schools were planned at a time when the pupil-teacher system was still being employed; this system was no doubt barbarous, but it could lead to pleasant external architecture. The long school-rooms were planned with windows in the end walls and in the centre of the external long wall, so that as many desks as possible were lit from the side. This meant that there could be large areas of blank wall at the ends of the main façades which gave them breadth and repose. In the 'nineties most of the early schools, designed for education on the pupil-teacher system, were converted to provide self-contained classrooms, so that the Aldenham Street school now presents a slightly different appearance to that shown in the illustration. The execution of the alterations carried out at this time was admirable.

The grimness of which these early board schools are so often accused is—at least so far as their exteriors are concerned—the grimness not of the individual buildings, but of nineteenth century capitalist London and the conditions which it imposed on the architect. With their constricted sites wrested from the midst of slum housing—one-third of an acre for 1,200 children was by no means exceptional—set in the grimiest parts of London with never a tree in sight, it is remarkable what Robson and his office did achieve. Imagine either of these two schools with plenty of space around them, with decent playgrounds and the greenery of trees and grass to show off the yellows and reds of their brickwork, imagine their sculptured red brick un-pitted by atmospheric pollution and their woodwork white for more than a few months after redecoration. It is a pleasant picture amply borne out by the rare occasions when an L.S.B. school is placed near an attractive open space, such as the school near Myatts Fields in Camberwell. It is important that the best of these early Board Schools should be treated with reasonable respect: the principle to be followed would seem to be that, unless additions in the modern manner can be clearly articulated from the original structure, then the style of the original should be adhered to. Substantial demolition may often be necessary to achieve a clear relation of new and old. One of the greatest services that could be rendered to these buildings would be to open up their forecourts, so often enclosed behind forbidding prison-like fortifications, and to replace at least some of the surrounding asphalt with trees, grass and planting. Exterior woodwork should be maintained a fresh white, and the decorative possibilities of the interior should be revealed by the bold use of colour. In this way the architecture would be given a chance to express its humanity. So far as the interiors are concerned the exceedingly high rooms of these schools are undoubtedly oppressive for small children, but it is difficult to see how adequate lighting could have otherwise been achieved with classes of sixty children and with the limited window widths available in load-bearing brick walls. Edwin Chadwick said that a school should be 'an implement



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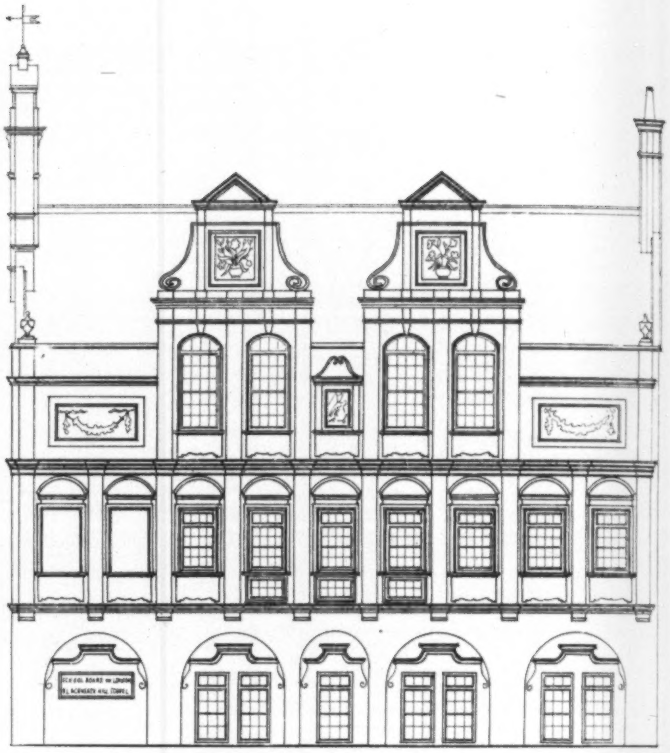

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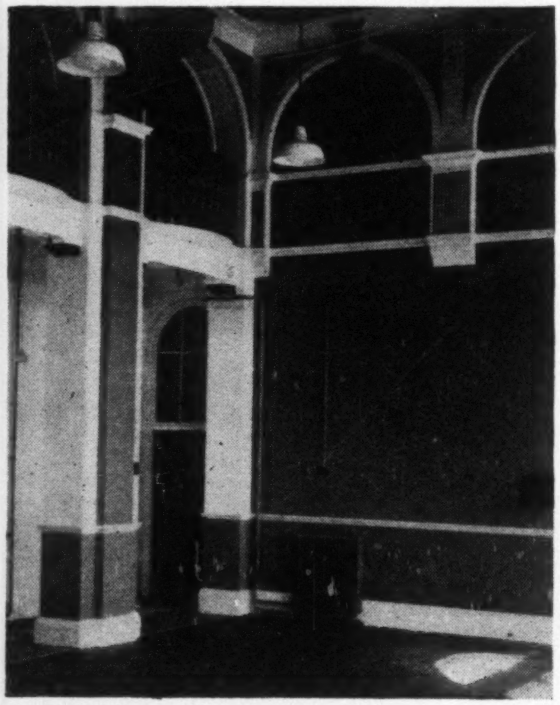
7, the School Board Man, seen here through the eyes of an Illustrated London News *artist, represented the enforcement branch whose activities filled Robson's architecture with ragged pupils—whose lack of social graces required both teachers and architects to temper humanity with toughness.*

8 *and* 9, *the end of the pupil-teacher system, and the change-over to self-contained classes, required alterations to the internal arrangements of Board Schools that were almost as drastic as the enlargements required by increasing numbers of children, but these alterations and enlargements were carried out in the spirit and the style of the earlier work, as at Blackheath Road, above and right, where the third gable of the main run of the roof continues the original work so sympathetically as to cause no appreciable break in the facade,* 10. *Behind this block was a large square 'keep' containing three superimposed halls and an art-room.*

11 *and* 12, *Berger Road School, Hackney, opened in* 1878, *shows Robson's style in its maturity; the hall below, with its bow-fronted balconies set in the arcading of the girls' school access-gallery, gives an*



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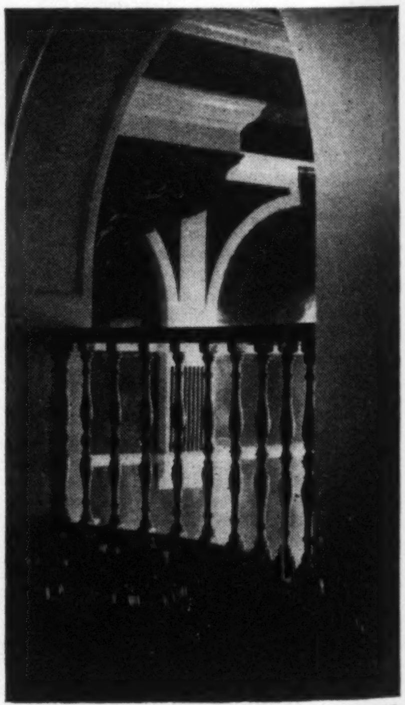

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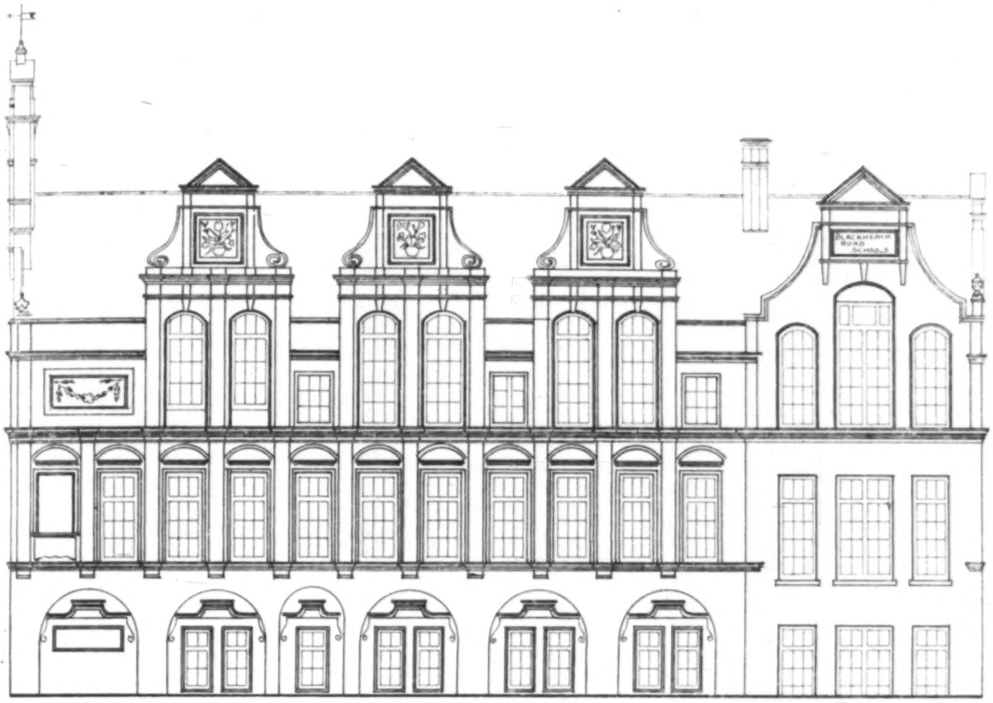

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excellent idea of his qualities as a three-dimensional designer, and of the quality of his detailing, which has been much enhanced by recent sympathetic redecoration by the LCC Architects' Department.
13, *the exterior of Berger Road School also emphasizes the qualities of the mature style—not only its tall gabled silhouettes and the relationship of the different storey-heights, but also the way in which the central position of the hall is marked by the class-room wings that stand, end-on, at either side of it, and the blank, urn-crested wall of the girls' play-area above it is rendered as an attic storey.*

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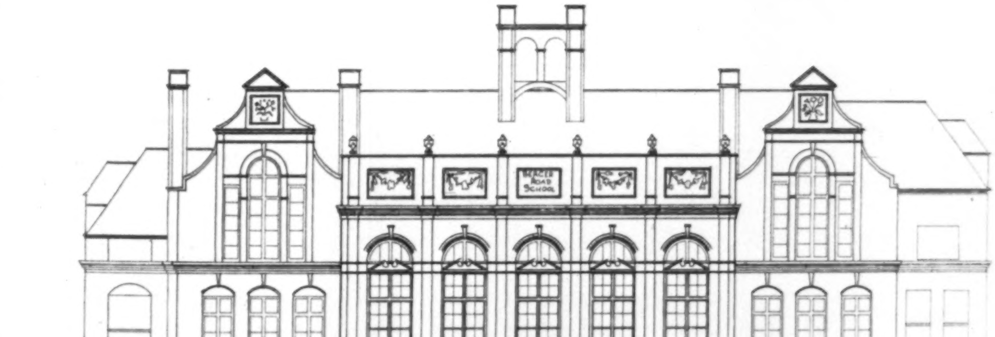

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fashioned by the best practical sanitary science,' and the overpowering importance he attached to 'hygiene' was typical of contemporary educationalists. In the circumstances they may well have been right. Glazed brick and hard easily cleaned surfaces were favoured at the expense of acoustics and warmth of appearance and in the result humanity was often lacking. Nevertheless, the L.S.B. schools can boast of many splendid interiors (where rescued from the cream, brown and green paint of later generations), in particular the galleried school halls, rising through two or even three storeys, which were nearly always, a befitting their function as focus of the school's life, treated with greater richness than any other room.

The Berger Road school in Hackney, 13, possesses a particularly fine school hall, which is now shown to great advantage by its recent redecoration at the hands of the General Division of the LCC Architect's department, in which a most brilliant use has been made of colour. The school also merits study because it is a typical example of Robson's work at its most mature. The school dates from 1878, by which time classrooms for instruction by separate adult teachers were being provided instead of large schoolrooms for instruction on the pupil-teacher system.

The school is a typical 'three-decker' for 1,200 children, with the infants at ground level, boys above and girls on the top. Each floor consists of six classrooms planned on three sides of a large central space. On the ground floor this space was planned as the infants' covered play area.[3] On the first floor was the school hall, rising through one-and-a-half storeys with a tall arcade on the long side, in which was inserted a gallery which gave access to the girls' classrooms, 11, 12. (This gallery, with its bow-fronted balconies opening on to the hall below, was the only internal connection between the boys' and girls' departments, suggestive of young Romeo and Juliet possibilities!) Above the hall, rising into the pitch of the roof, was the girls' covered play area which was top-lit.[4]

The plan is eminently workable and economical, and it has a straightforward simplicity that the modern architect will find sympathetic.[5]

As with the Champneys school already described the external architectural elaboration of the Berger Road school is concentrated at high level. Unfortunately the Berger Road school has suffered particularly badly from the erosion of its decorative brickwork through atmospheric pollution.

What little decoration—as opposed to architectural embellishment—there is in schools of this period was carefully placed for maximum effectiveness. Although not as highly standardized as the internal detailing—Robson found mechanically reproduced decoration, such as moulded terra cotta, lifeless, without the animation of handwork—remarkable consistency exists in the way decoration was used. It always appears set in panels or cartouches and the subjects are similar from job to job, 14. Pre-eminent are the title panels which include the initials of the L.S.B. and perhaps the date. Fifty years ago Lethaby complained that the decorative possibilities of lettering and inscriptions on buildings were insufficiently exploited, and the same is abundantly true today. Local authorities and others might take a leaf from the L.S.B.'s book and make it a matter of course to label and date their buildings.

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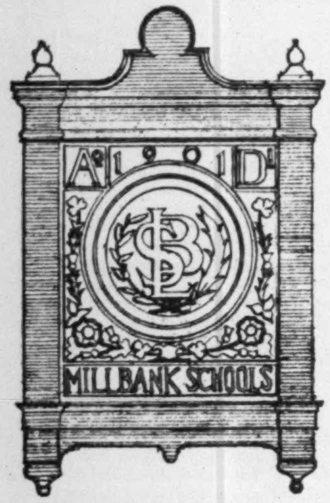
[3] As in many other schools this playground has now been adapted as an Assembly Hall.

[4] Between the two classrooms on the long side of the Assembly Hall are inserted staff rooms, two being placed one above the other in each classroom storey height. This favourite planning device, leading to a bay of different function and scale on elevation, was usually treated rather playfully. At Berger Rd. there is a small V-shaped projection. There is a school in Ashmead Way, Lewisham, that rises almost sheer above the railway cutting, where this staff room strip has a semi-circular oriel becoming a circular turret above the roof-line. This must be one of the most inconveniently sited schools in London—suited only to a train-spotters' club—but it does provide a most dramatic picture seen in sharp perspective looking up from a passing train!

[5] An intriguing school was planned in 1873 but never executed for reasons of cost, in which the second floor was carried on cast-iron columns so that the entire first floor comprising school hall, two big school rooms and two classrooms, could be thrown into one space by means of sliding partitions.



14, badge-panel of the Millbank Schools, typical of Robson's functional-decorative detailing.

In addition to the title panels the board schools made use of three other types of cartouche. There were swags and trophies cut in brick or stone, rarely just conventional; there were floral patterns among which a series of designs of flowers in pots, carved in brick or inscribed in stone, were particularly good, because, although nearly always set at the very summit of the buildings, the designs are bold enough to read from ground level while retaining grace and sufficient delicacy. Deep cutting into white stone is probably the secret, so that shadow and the holding of London grime come to the designer's assistance. There was a piece of engraved sculpture in the South Bank exhibition, but because the material was dark and the lines were fine, it did not tell from more than a few feet. Robson also made use of a few figural bas-reliefs cut in brickwork—such as the 'Knowledge overpowering Ignorance' designed by McCulloch and was repeated in several schools. (It was recut every time from the same model, not cast). These latter are neither so intrinsically good nor architecturally so effective as the title panels or the floral designs, and the figures in them look absurdly small.

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Robson's achievement, on the other hand, lay firstly in his incisive analysis of his objectives, his ready understanding of the challenge which new social demands had placed before him; secondly, in his prompt understanding that designers such as Champneys and Stevenson had hit upon a stylistic approach that might be developed in answer to this challenge; thirdly, in the superb confidence and virility with which he and his staff carried through the development of this style, giving power and sometimes grandeur where its originators could only achieve charm; and, lastly, in the truly Victorian drive with which he pushed a vast programme of work to completion with architectural standards of the very highest order maintained throughout.

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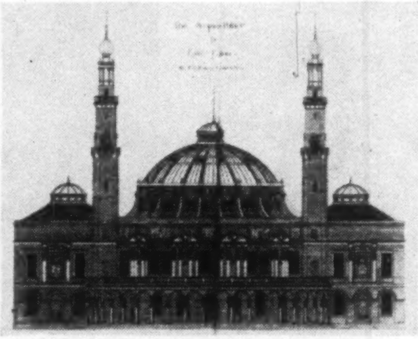
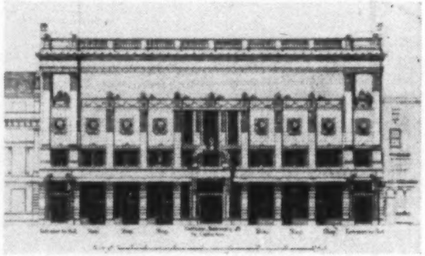


15, *The People's Palace, Mile End Road.*



16, *The Royal Institute Galleries, Piccadilly.*

ID

right, detail of dining room chandelier, 14 ft. long and 8 ft. across, made entirely of brass. Each fitting contains 37 lamps of 40 watts each, and were made in three parts which connect into one another. There is a connector at each junction and the top 4 lamps are a pilot device on separate switches. Inset: a sketch of the chandelier.

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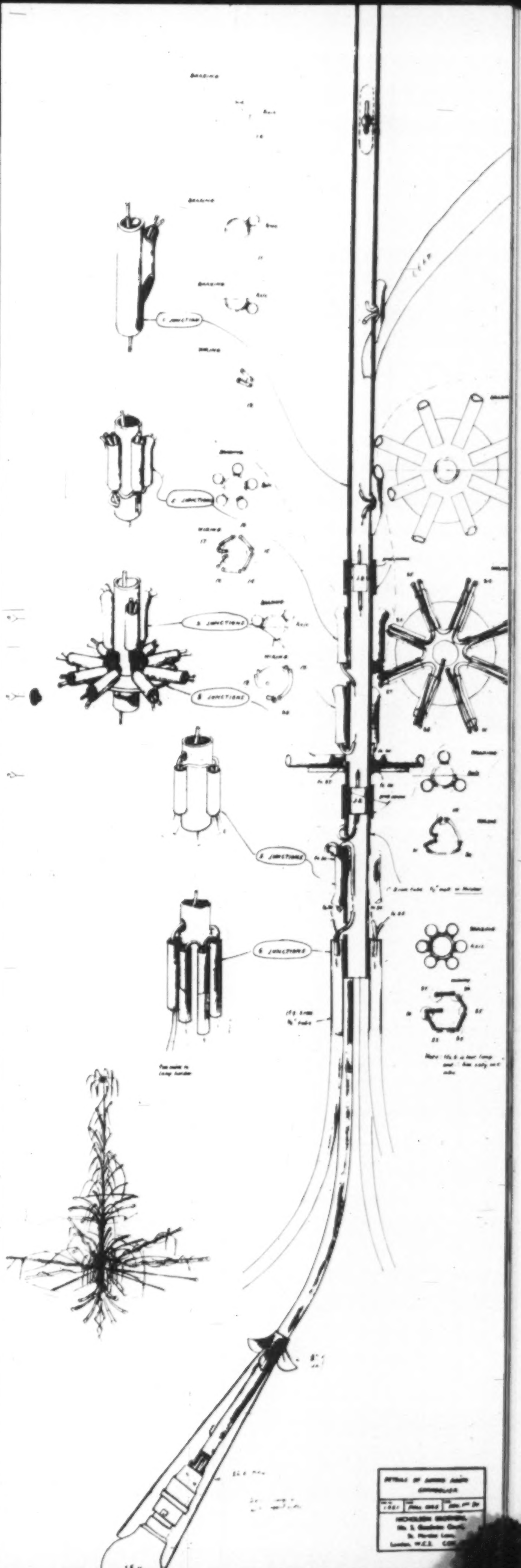
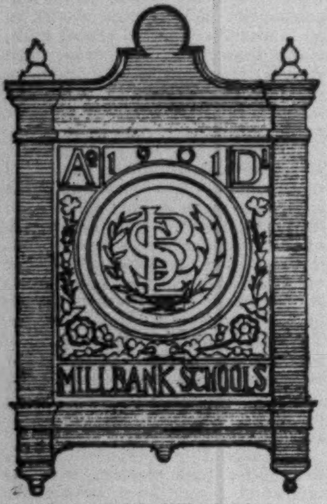
There are four brass chandeliers in the dining-room, enamelled deep blue and pale yellow; each contains thirty-seven electric lamps and are 14 ft. high and 8 ft. wide. Numerous technical difficulties had to be overcome in the making of the chandeliers. The first was one of wiring; a large diameter tube down the middle of the fitting with junction boxes would have looked too massive and after much thought the wiring was brought to the minimum thickness capable of taking the load and run in series so that at any point there were no more than two wires down the centre tube and no junction box



standardized as the internal detailing—Robson found mechanically reproduced decoration, such as moulded terra cotta, lifeless, without the animation of handwork—remarkable consistency exists in the way decoration was used. It always appears set in panels or cartouches and the subjects are similar from job to job, 14. Pre-eminent are the title panels which include the initials of the L.S.B. and perhaps the date. Fifty years ago Lethaby complained that the decorative possibilities of lettering and inscriptions on buildings were insufficiently exploited, and the same is abundantly true today. Local authorities and others might take a leaf from the L.S.B.'s book and make it a matter of course to label and date their buildings.



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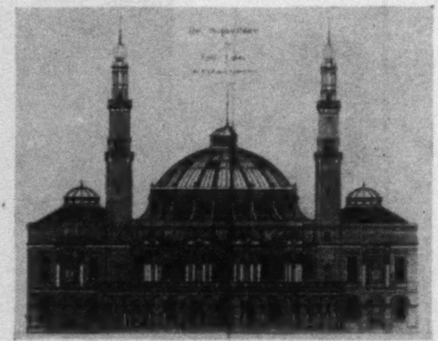

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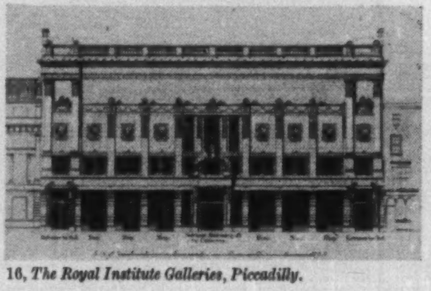

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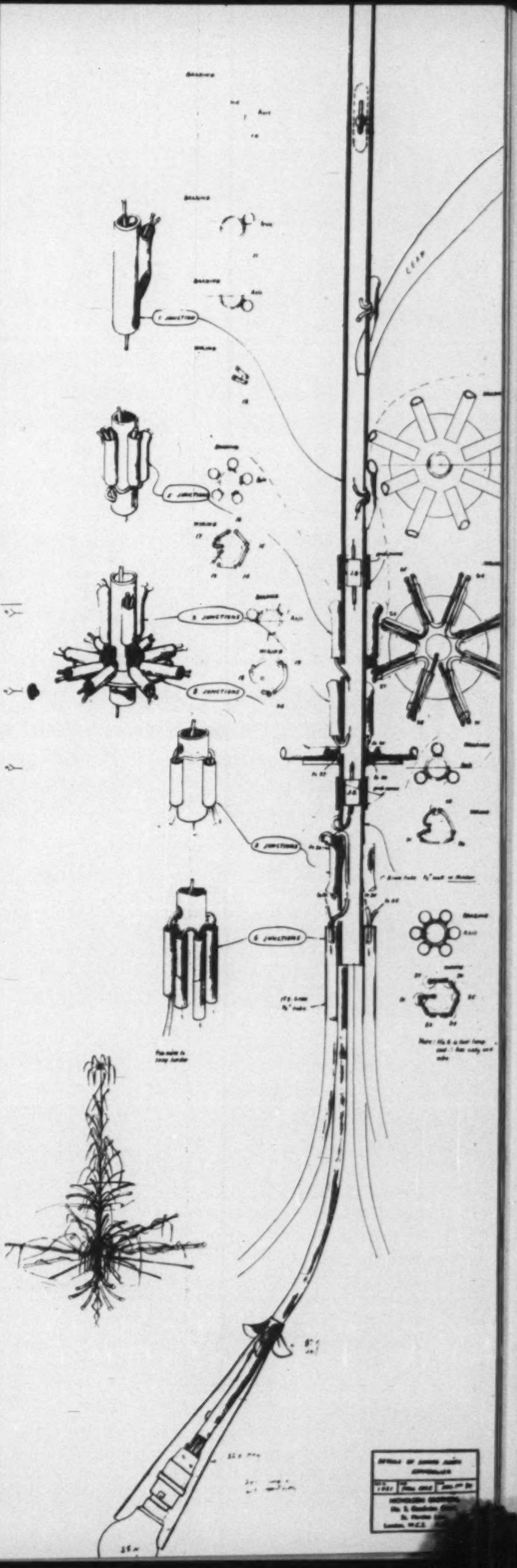
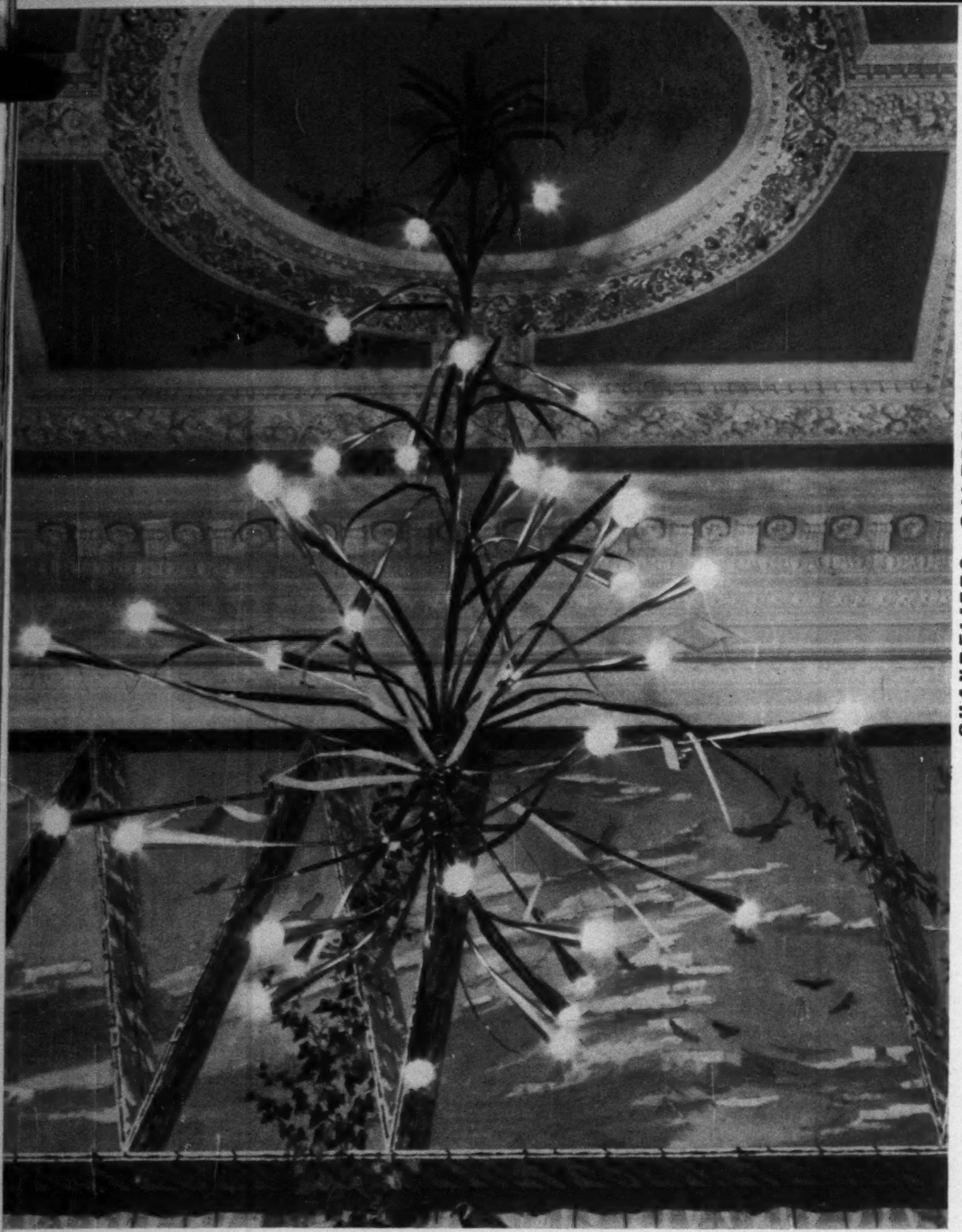




One of the four brass chandeliers, enamelled deep blue and pale yellow. Each contain thirty-seven electric lamps and are 14 ft. high and 8 ft. wide. The ceiling is in pale blue and white, decorated with golden eagles and gilded roundels.

was required. Thickness was then determined by strength, resulting in a 1 in. diameter tube. The horizontal members were welded to a 3 in. diameter steel boss, and the curved ones were welded into the main stem.

In order to get the chandeliers into the hotel, each was divided into three sections, the largest 8 ft. x 4ft. The joints finally used differed from the one shown on the drawing; one tube now overlaps the other, with a bolt through both. Access to wiring and the replacement of bulbs has been allowed for.

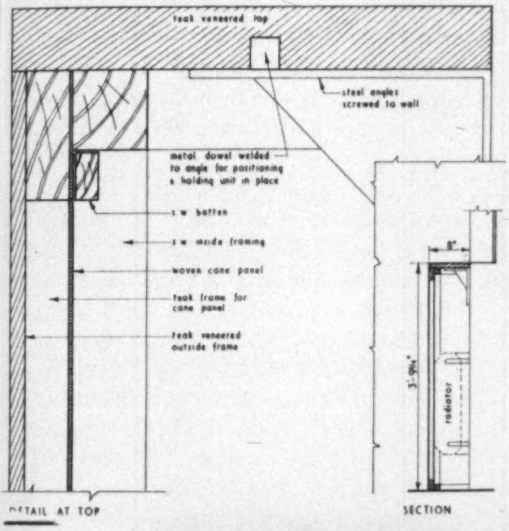
The original design provided wiring which could take either 25-watt or 40-watt bulbs—it was first intended to use 25-watt but this was later changed to 40-watt, which is nearly 1,500 watts per fitting. The top four lights are run on a separate circuit as pilot lights.

Shoe Showrooms in Regent Street W1

designers: Conran Contracts

3, general view of the office.
4, office detail, showing radiator cover formed in teak veneered asbestos board with stretched cane front panels (detail, below left).

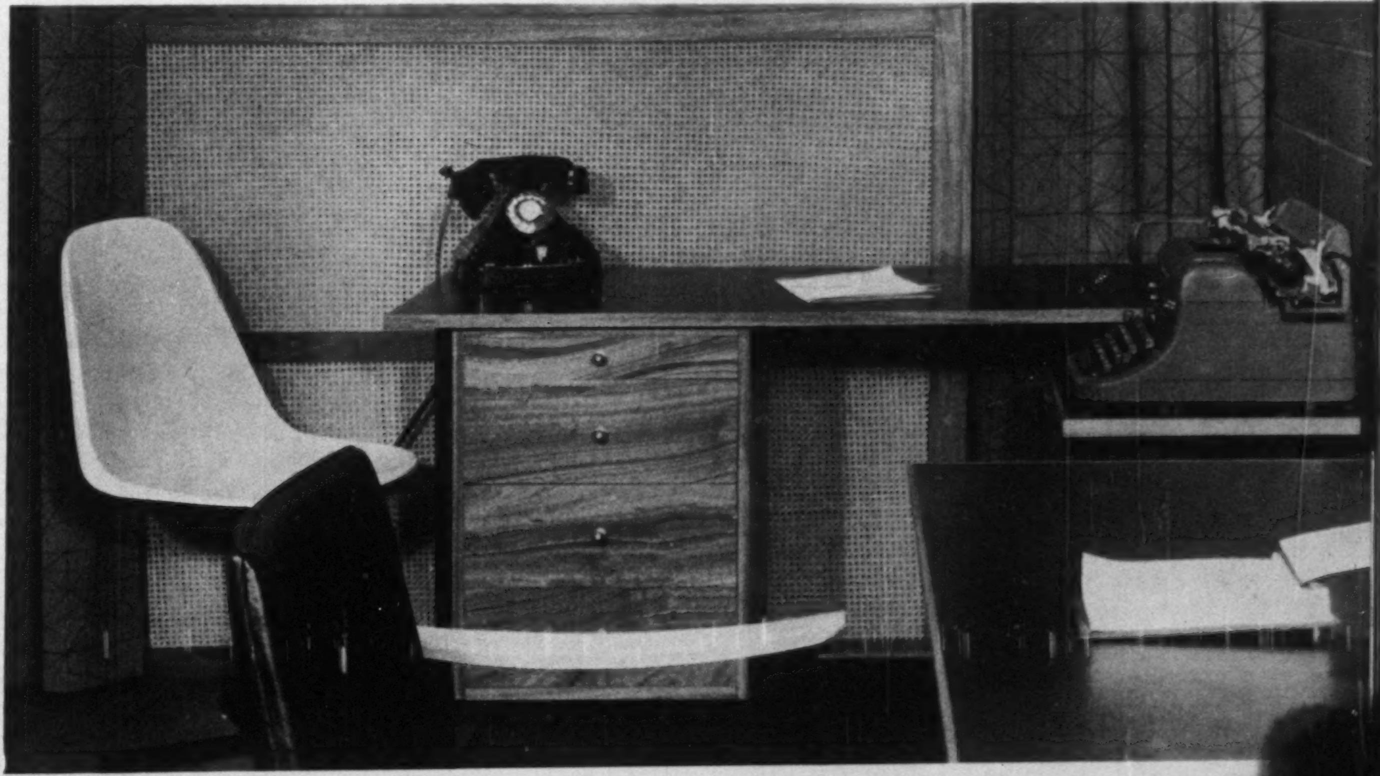
This showroom was designed to show a large number of shoes as effectively as possible in a confined space and on a small budget. The long freestanding display units are carcassed in teak and the cabinets contain storage space for shoe boxes. The sloping display shelves above have a highly polished resin finish, to prevent damage to the soles of the shoes, which are held in place by heel rails wrapped in felt and sunk in the surface of the shelves. The shelves are supported on triangulated satin chrome brackets, adjustable on keyhole strips. The radiator covers occupy the full width below the windows in the showroom and office, and are of teak veneered asbestos board with cane front panels. One wall of the office is formed of solid walnut planks laid horizontally. In the showrooms the general finishes include a pine board ceiling, rich printed velvet curtains and grey carpet. The end wall is covered with stretched fabric, grass cloth and photostats. The colours are blues, greens and the natural tones of the grass cloth and pinoleum, to form a background to the leather and to the strong colours of the ladies' shoes. Over-all lighting is by tungsten spotlights and pendants; fluorescent tubes wired through the members light the display shelves.


teak veneered top
steel angles screwed to wall
metal dowel welded to angle for positioning & holding unit in place
s w batten
s w inside framing
woven cane panel
teak frame for cane panel
teak veneered outside frame
8"
3'-9¾"
radiator

DETAIL AT TOP

SECTION

3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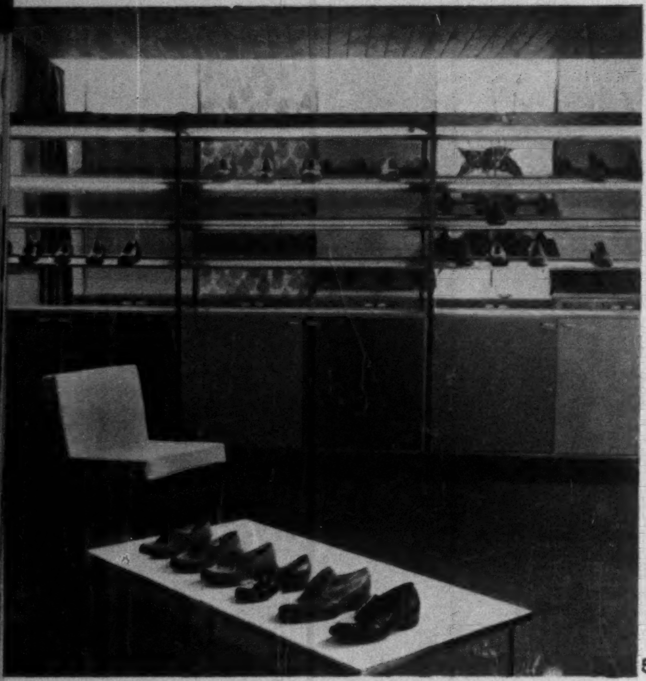
SHOE SHOWROOMS IN REGENT STREET, W1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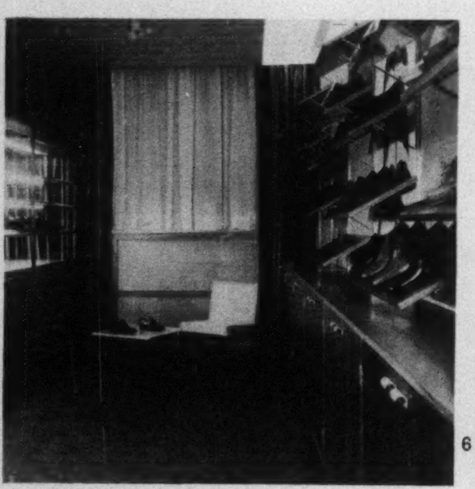
5, the showroom with long freestanding display units lit by fluorescent tubes wired through the frame members. Stretched fabric, grass-cloth and photostats provide the background.
6, cane-covered radiator and printed velvet curtains. On the left and right the sloping shelves of the display units are supported on triangular satin chrome brackets, adjustable on key-hole strips.
7, the pine-board ceiling with tungsten spotlights to balance the strong lighting from the display units and give over-all illumination.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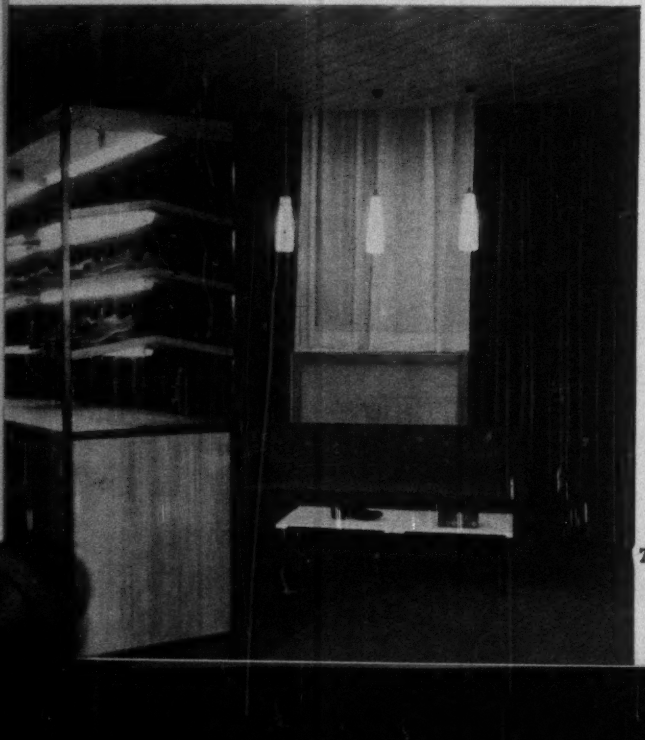
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Studio in Athens

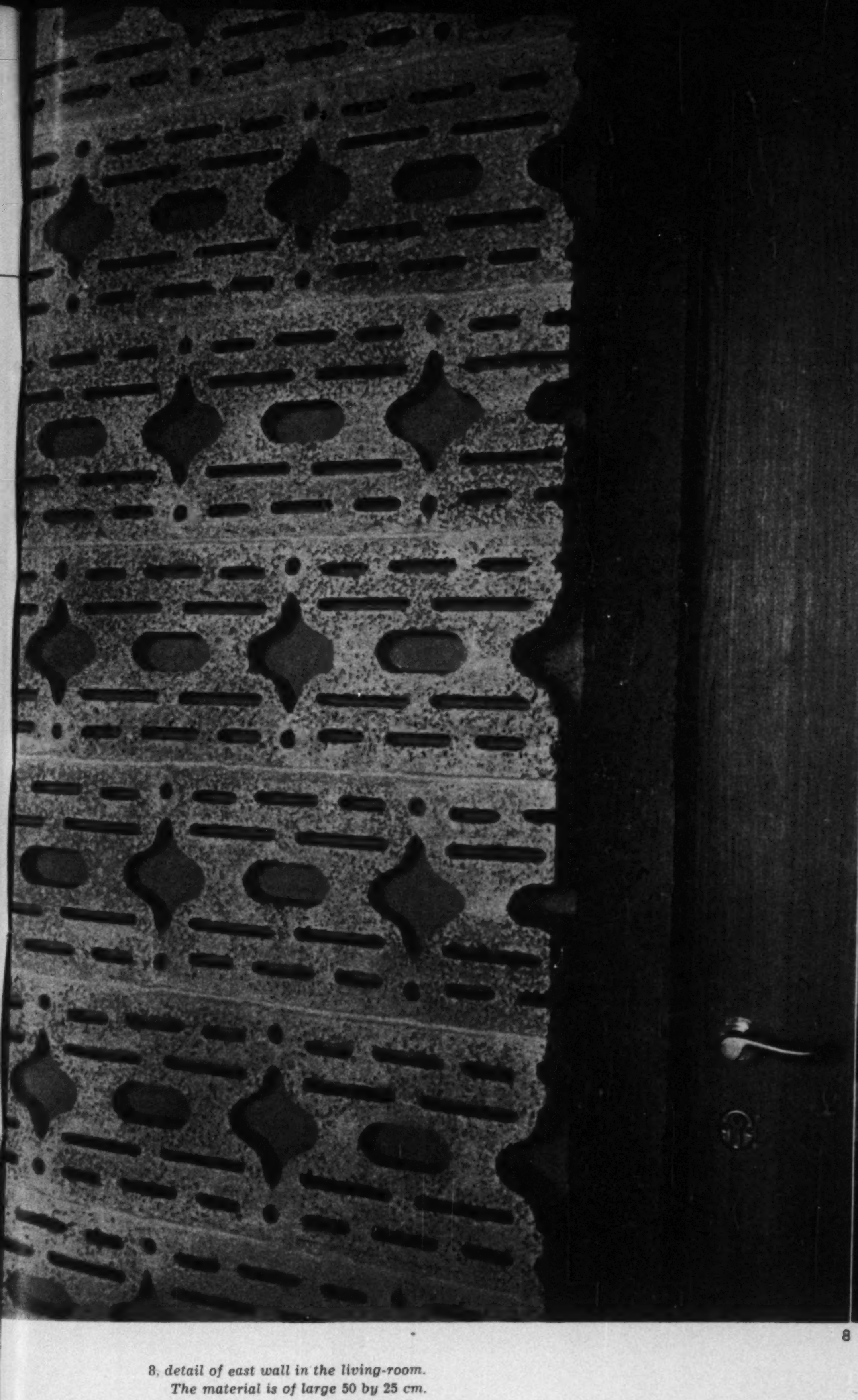
designer: N. Hatzikyriakos-Ghika

A small top-floor flat and the roof terrace above, in an apartment-block with an obtrusive concrete frame, formed the basis of this studio in Athens, designed for his own occupation by the painter Ghika, with the assistance of two of his students from the Faculty of Architecture.

It was impossible to suppress or disguise the concrete frame where it obtruded into the existing accommodation: it was necessary to turn it into an architectural virtue, and the solution evolved was applied in the new rooms as well. The general aim was to emphasise the impression of a massive post-and-beam construction; new beams were inserted, over-thick columns were split, visually, by deep grooves down the centres of their sides and an air of rough strength was given by chiselling over all concrete surfaces. To keep the ceiling in character, its plaster was hammered over to give an equally rough texture. Specially blended light enhances the grey of the structure and the white of the ceiling. The effect of this exposed structure and these rough textures could perhaps be called Brutalist, but the manner in which they have been created, like the manner in which the walls have been treated, deviates from the Brutalist axiom of using materials strictly 'as found'.

Wall surfaces are also textured, usually by the repetitive surfaces of brickwork or building blocks. Some of the walls are in fair-face brick, left in its natural colours or painted green, yellow, blue; others are of common pierced bricks, with their perforations randomly plastered in, or even completely filled, sometimes in combination with deeply cut channelling to show an appreciable thickness of terra-cotta-coloured mortar, and others again are faced with a type of pierced block used for earthquake-proof construction, but here sliced and set on edge to form a pattern with a repeat as large as the most generously-scaled wallpapers.

These rough and three-dimensionally patterned surfaces form an admirable contrast to the cork tiling of the floor, and an equally effective background to the *Empire* furniture which constitutes the bulk of the movable pieces, except for the purely functional tackle, such as drawing boards, used by the painter. There is, in addition, a certain amount of built-in furniture, some in wood, some—like the door-cases—of concrete.



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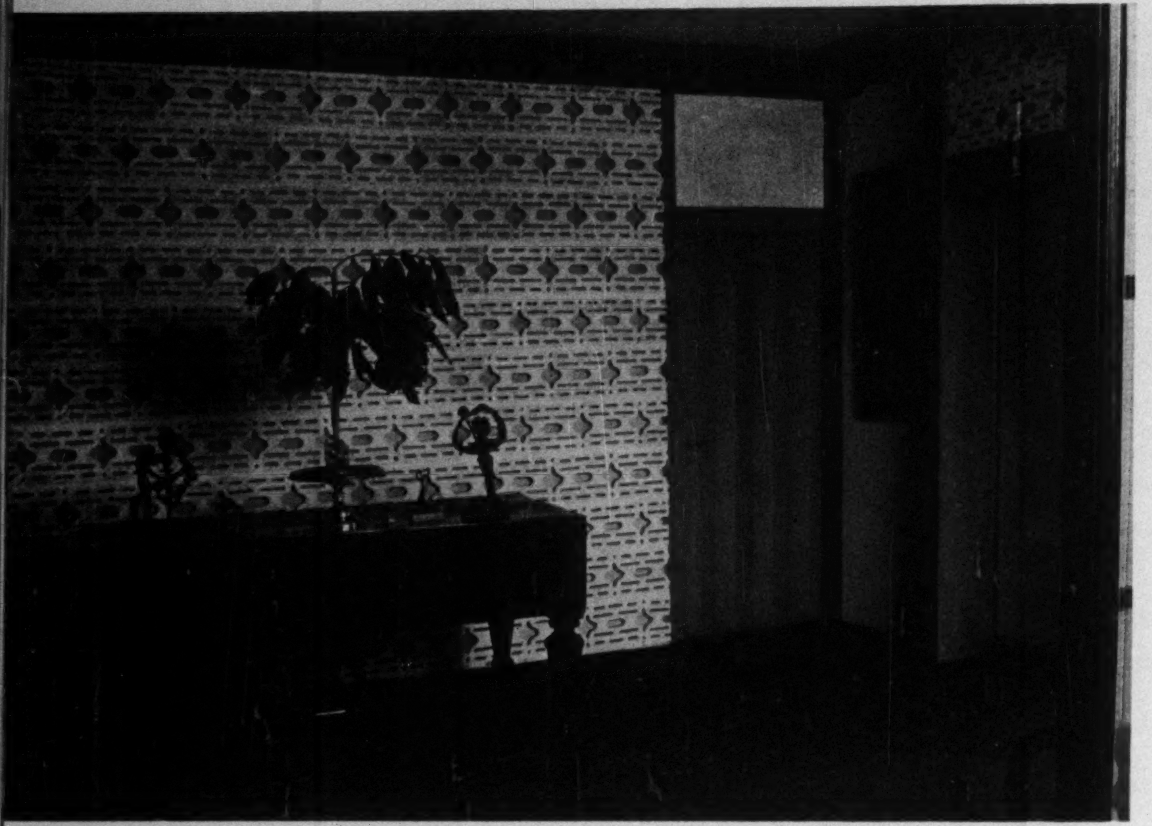
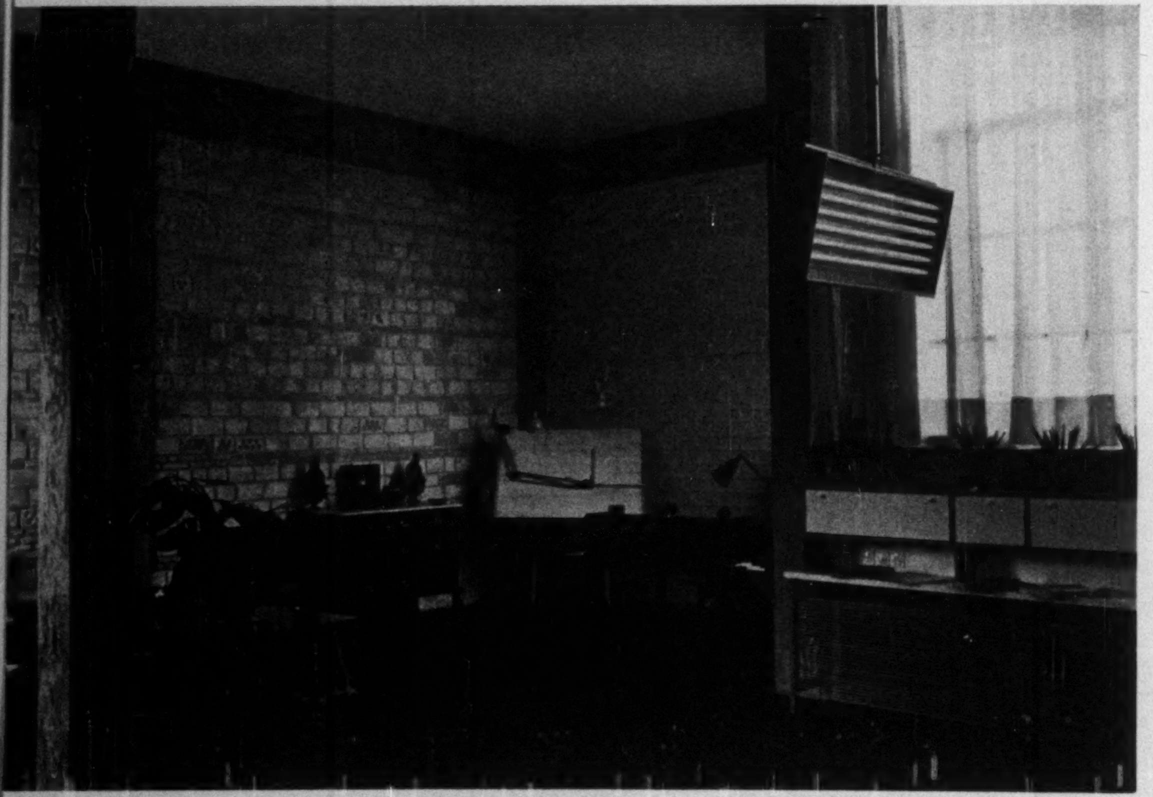
9

8, detail of east wall in the living-room. The material is of large 50 by 25 cm. concrete blocks made for earthquake-proof construction. The blocks were sliced and placed vertically to show the patterns which are normally not seen. Concrete is used for door frames.
9, detail of wall in studio of salvaged cement and clay bricks. The mortar is coloured terracotta.



10, the south-east corner of the living-room. To the right are sliding glazed doors with concrete chiselled framing on a rough mortar wall painted white. The floor is of green plastic



11, the studio, with three-colour fluorescent light which can be moved along a railing in the ceiling and turned in any direction; contact is made along the rail to eliminate wiring.

TOWNSCAPE

Gordon Cullen

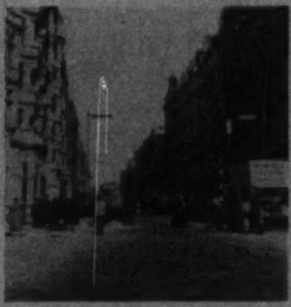
WESTMINSTER REVISITED

Ten years ago* the REVIEW published its plan for the precinct of Westminster—Westminster Regained. Today it returns to the same field with a more modest but a more sharply focussed objective. It returns in the hope that some tiny fragment of urban drama may be salvaged out of the piecemeal, day-to-day, unrelated and unco-ordinated renewal of property (one can hardly call it redevelopment) that is taking place over the years—in the precinctual area.

Plans are prepared for the rebuilding of 1-19 Victoria Street which leads to the west front of the Abbey. I went to see the architect who explained to me his ideas for the layout of the building vis-a-vis the Abbey. I went away and tried to link his development with other contingent buildings which must soon be ready for rebuilding and to link both with the precinct of Westminster. The results are shown on these pages. It is, I believe, the last time for fifty years that the chance to redeem this part of London will come our way.

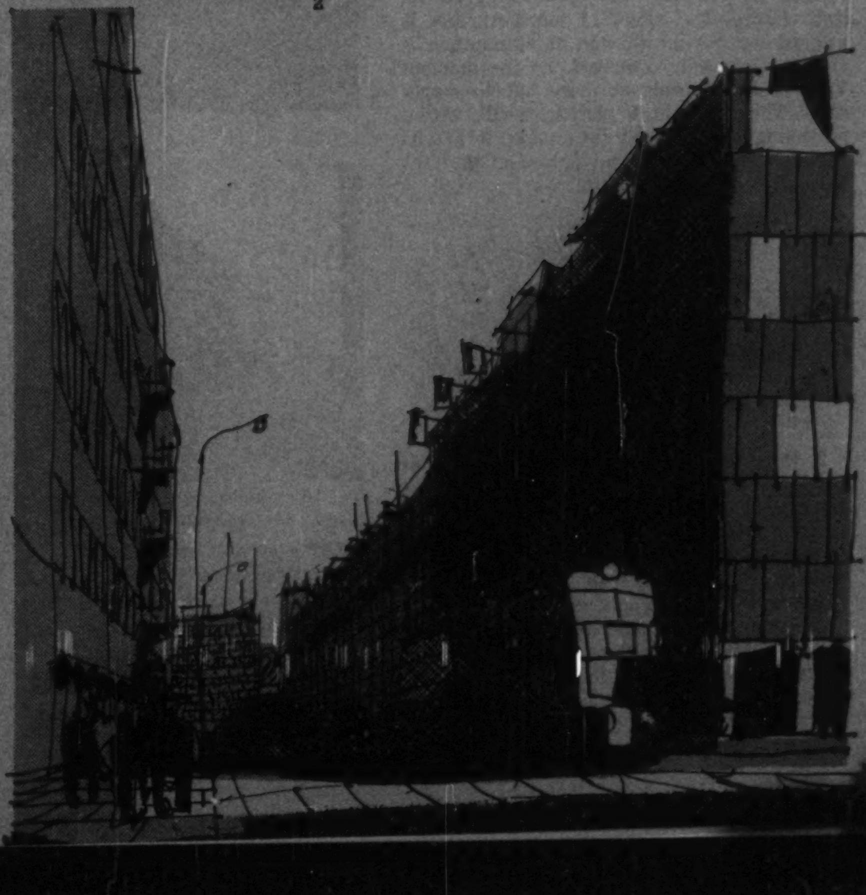
There are several approaches to Parliament Square, the core of the precinct, and of these those from Millbank and Whitehall can be accepted as fitting (worthy and suitable curtain raisers) to the scenes they eventually unfold.

There is another entrance, that from Victoria Street, which is disappointing and intractable. It is an uncompromising diagonal straight line leading nowhere; not a single monument or spire can be seen, nothing but open sky and a Victorian office building. The whole sequence of views which it throws down from Broadway (the first glimpse of Westminster) right into Parliament Square is simply a list of alienations. The road is like a stranger striding morosely and ill-manneredly through a group of people in animated conversation. And it is so insistent, this traffic route, that it dominates the group and destroys all relationship. The sense of enclosure and precinctual pattern are simply brushed aside and scorned.



1 *On the left, 1, is the Victoria Street of today before it debouches into Parliament Square. On its right-hand side lie Nos. 1–19 which are to be demolished and rebuilt. Taking advantage of this development the* REVIEW *puts forward a scheme for the area, the first result of which would be to close Victoria Street visually so that it becomes a coherent unit as shown below, 2. (Note that the elevations of the development of 1–19 Victoria Street shown in these drawings are purely diagrammatic. They will be designed by the architect, Mr. Ronald Fielding, later.)*

2



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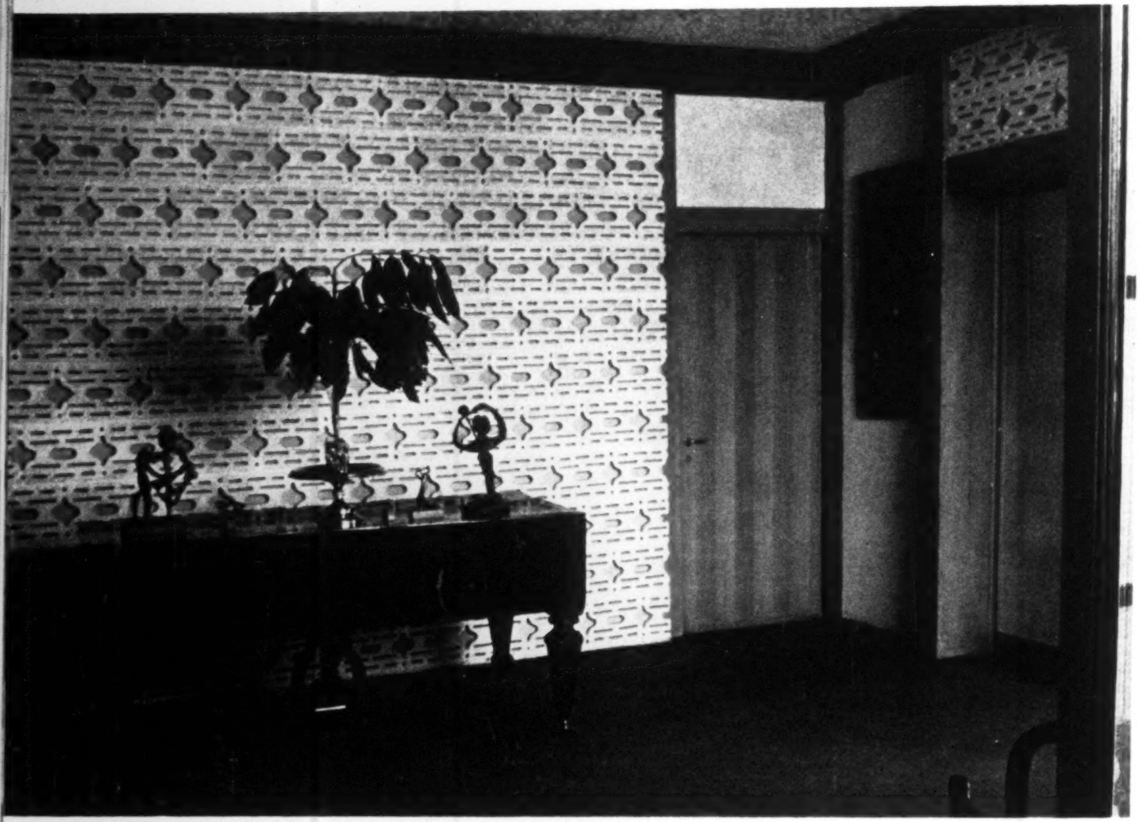
* Westminster Regained. AR, November, 1947.



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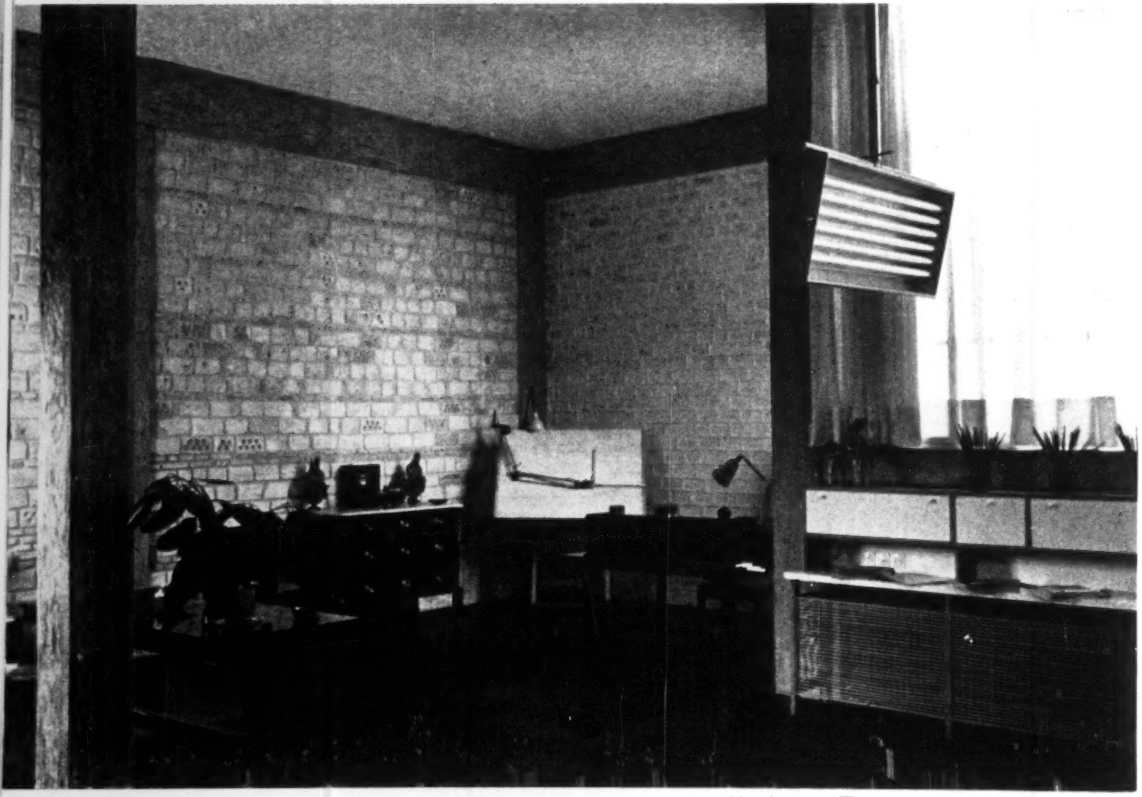

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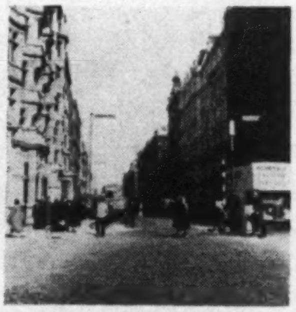

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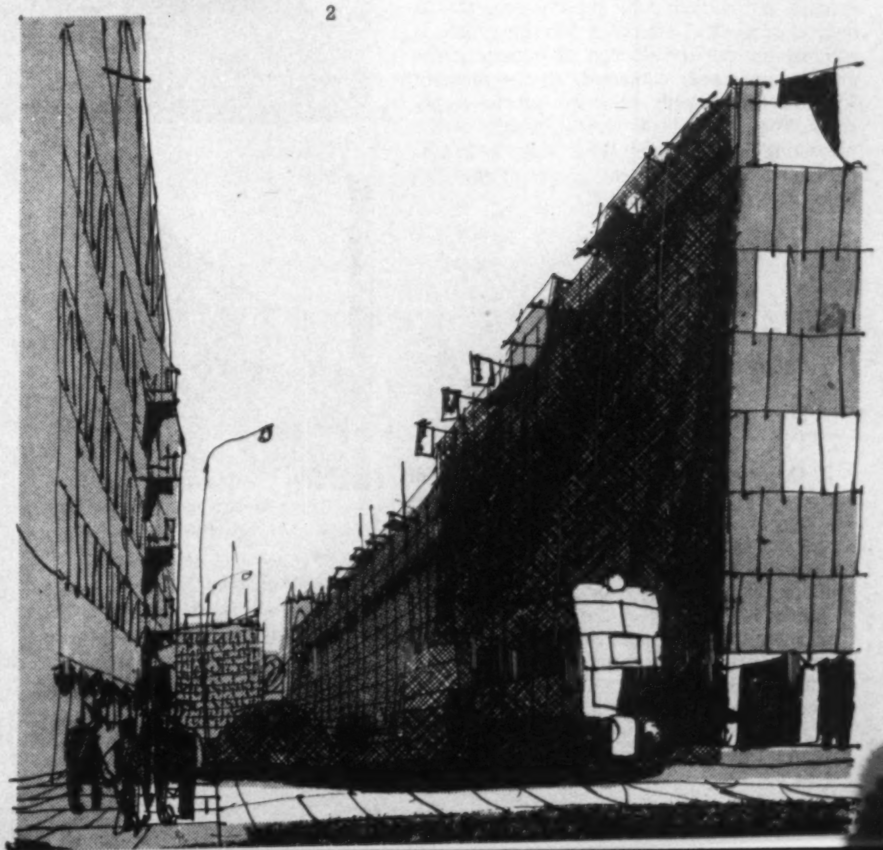

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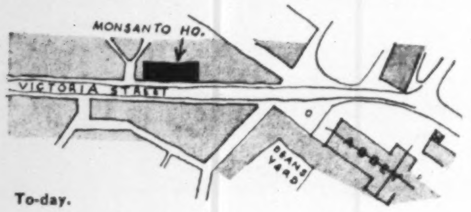
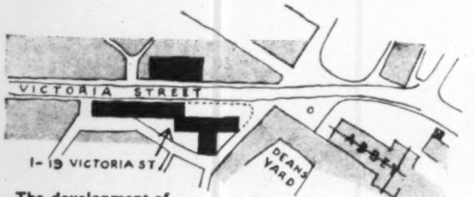
The key to the problem lies in this road. The road must participate in the precinctual pattern as we move forward and not disrupt it. This can be done by the most modest of gestures just as sympathy or understanding can be communicated by a movement of the eyebrows.

Having seen the proposed disposition of the new building for nos. 1-19 Victoria Street it is possible to capitalize on this plan. The proposal made here is to realign Victoria Street from Monsanto House to the roundabout in Parliament Square. At present it is a straight line, thus :—

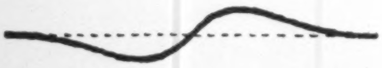


To-day.



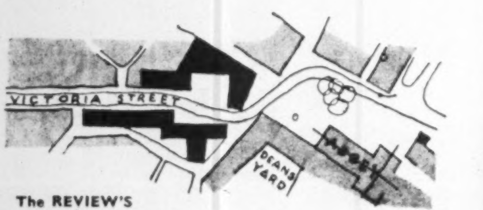
The development of 1-19 Victoria Street.

I propose this :—



The following is a list of the advantages which will flow from this simple gesture.

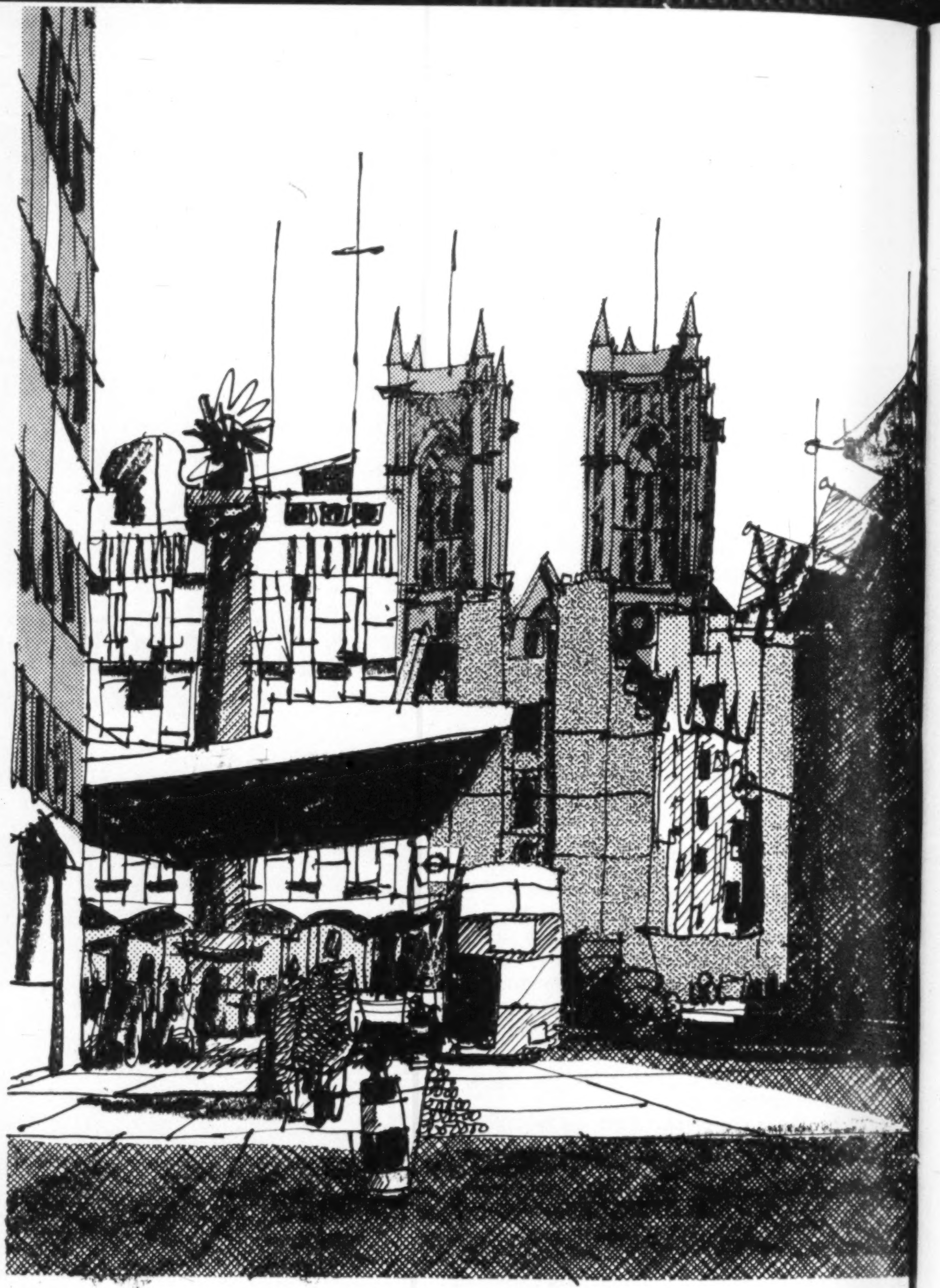
1. A slight deflection of road alignment if it extends far enough will quickly generate its own closure. The effect of foreshortening is astonishing and the illusion of termination is quickly and easily contrived. At the moment Victoria Street leads nowhere but to empty space. The proposal is to close it visually with a projecting building and thus make it a self-contained unit, a coherent phrase in the sentence. It will end in a square.



The REVIEW'S proposal.

2. On entering this square the West front of the Abbey is revealed more fully. The road aims directly at the twin towers—at last some directness, some clarity. Interposed between us and the Abbey, however, is the small Scott building which acts as scale maker and as one advances it gradually cuts off the West front. This square is made possible at the expense of filching part of the forecourt of nos. 1-19. Taking the larger view, however, surely it is better to have open space in the sunshine than overshadowed by a tall building.

3. At this point, leaving the square, the



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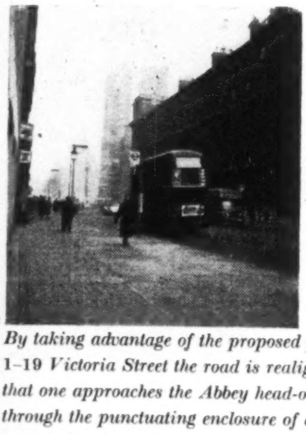
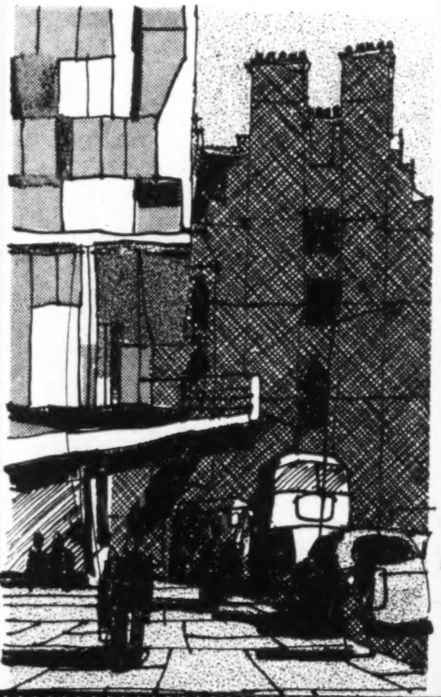


4

By taking advantage of the proposed plan for 1–19 Victoria Street the road is realigned so that one approaches the Abbey head-on through the punctuating enclosure of a new square, top drawing, 3, instead of sliding aimlessly past the Abbey and into the void as at present, photo above, 4. On the right we see how the dramatic situation is coiled as Scott's little building cuts out the West front of the Abbey, right 5, and all the buildings crowd together at the point of transition.



5

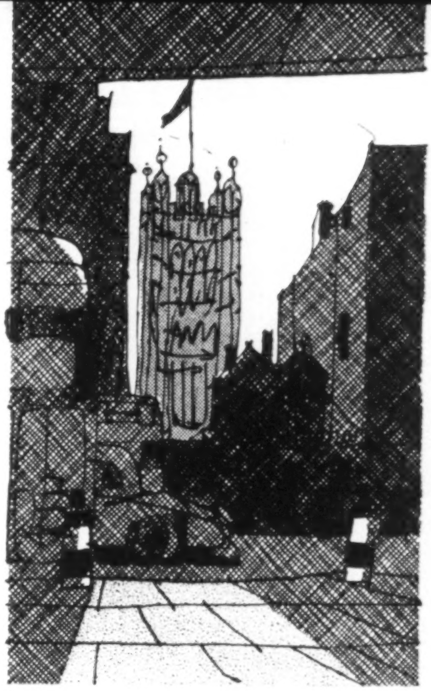
road bears left and enters the Abbey forecourt. The great West front is now finally and suddenly revealed after you pass through the narrows. This space is now an enclosure since the concentration of radial streets which suck the views has been broken and the wound staunched.

4. The most exciting views occur just at this point. It is a place of visual fireworks. Not only does the Victoria Tower suddenly and unexpectedly appear in a space between two buildings but the whole miraculous enfilade of towers and monuments crowd together jubilantly. It is one of the great views and the space is pedestrian.

5. The new road alignment will throw the available open space decisively into the visual possession of the Abbey thus resolving the present ambivalency.

6. The new arrangement of building at the junctions of Victoria Street and Tothill Street will result in the creation of that most essential element, a west wall to the Abbey forecourt. At present there is a needle point, a concentration distracting vistas.

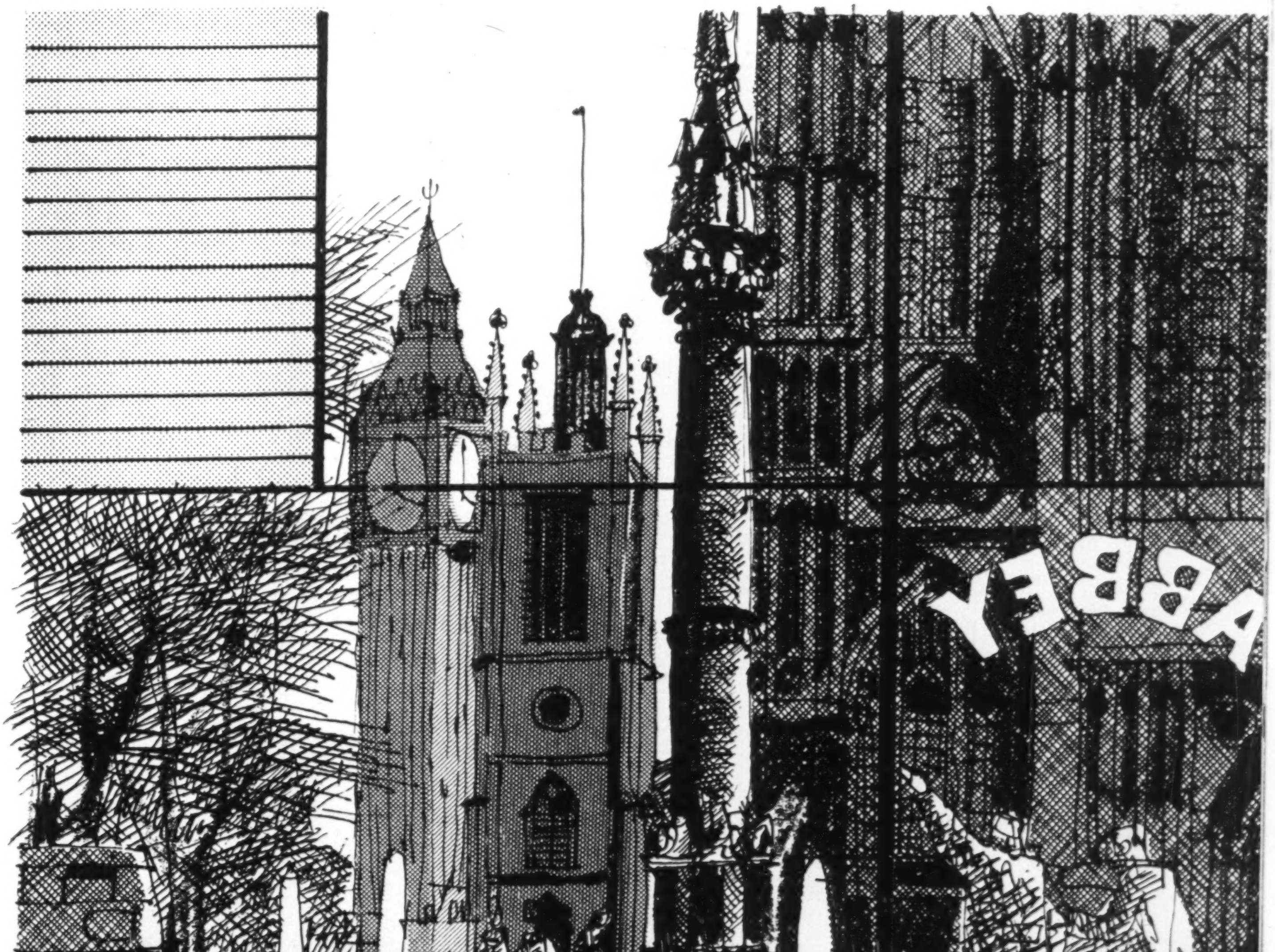
These benefits, all of which will help to establish a precinct, flow from the road alignment. That this can be done without major expense and without slowing traffic is clear.

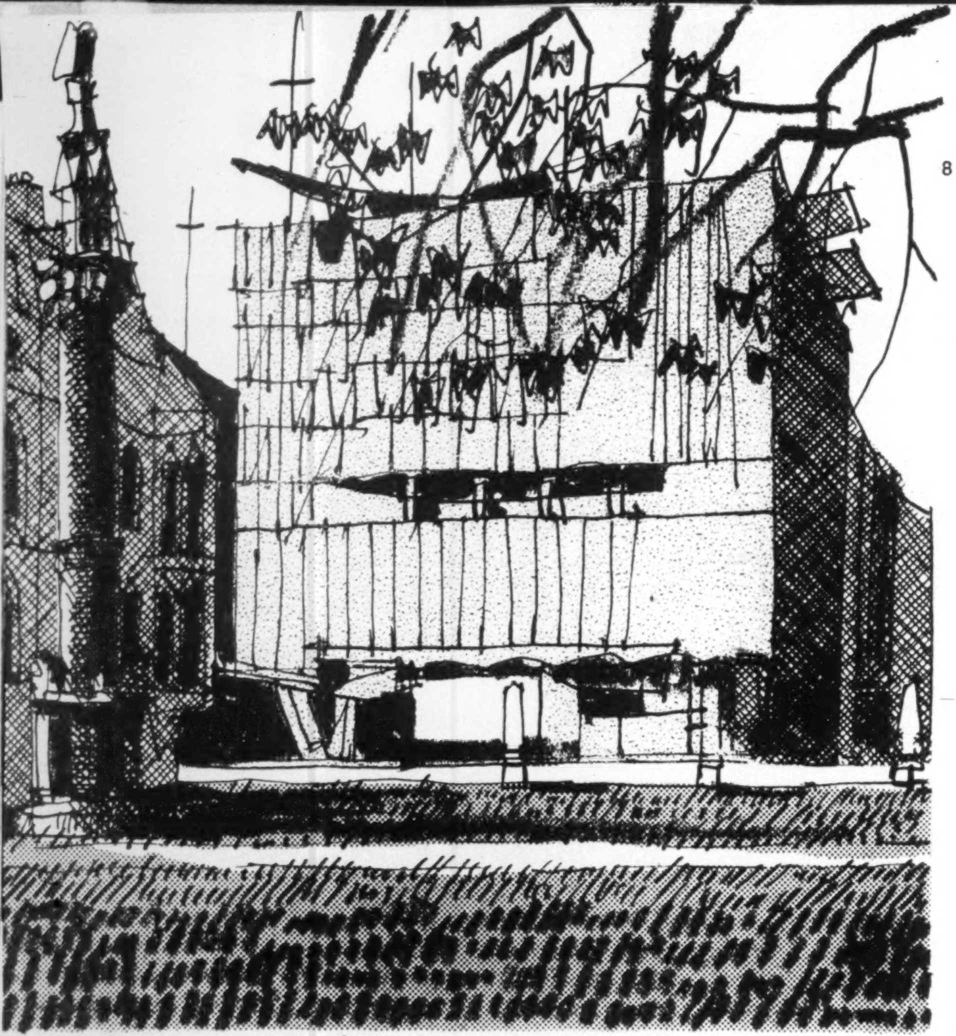


6

In the moment of transition from the unity Victoria Street to the new and astonishing unity of Broad Sanctuary, quite suddenly half a million cubic feet of masonry, the Victoria Tower, swings into view and is lost again, left 6, as the whole jubilant enfilade of towers, masts and monuments is revealed, below 7, one of the great views of Europe. View? It is more like organ music.

7





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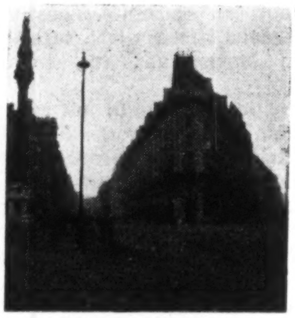
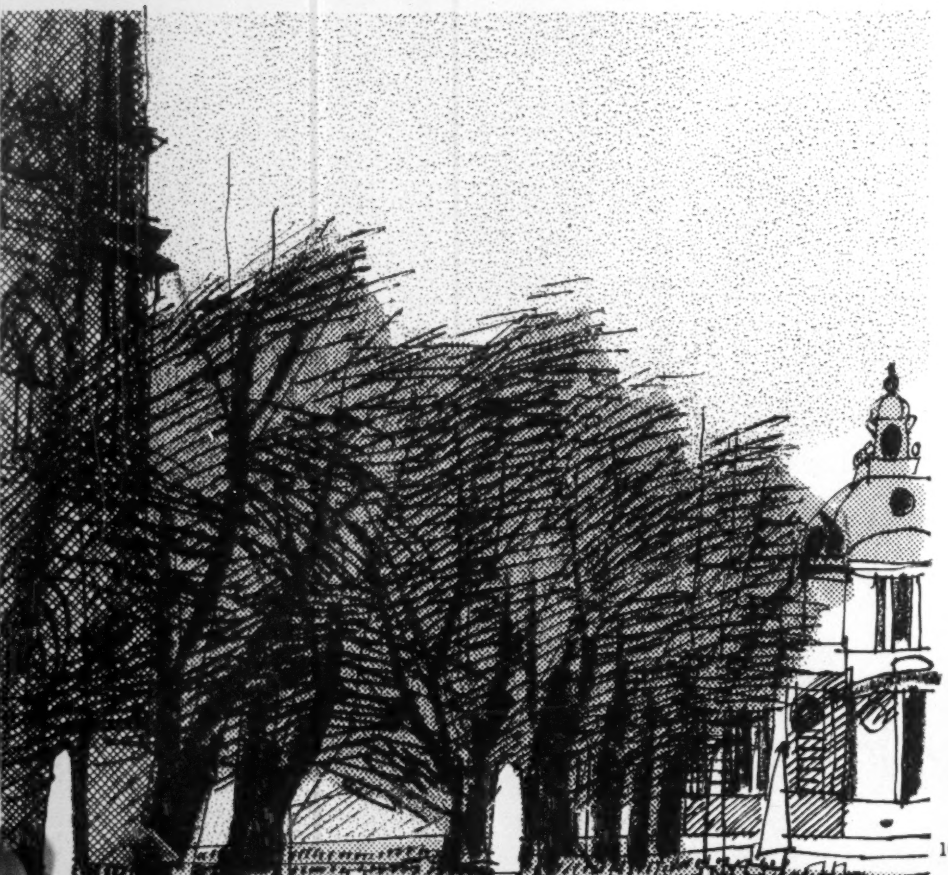


9

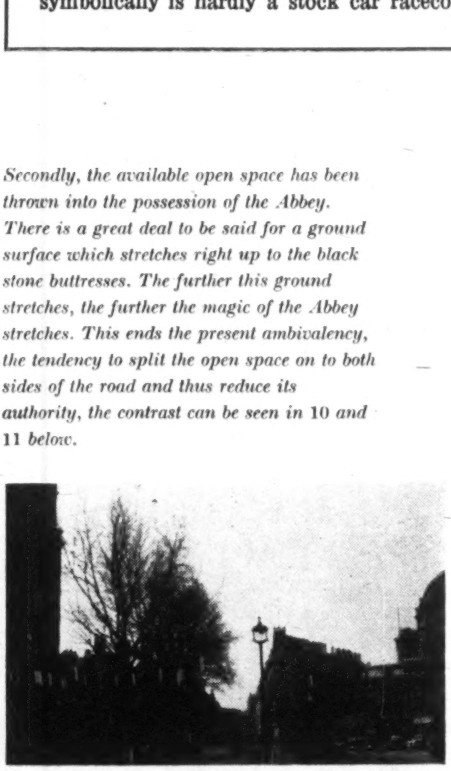
Once inside Broad Sanctuary we find that it begins to live up to its name at last. For although it is still busy with traffic, two major changes have taken place. First, it has become a visual enclosure, thanks to the proposed new building which closes Victoria Street, left 8, and the yawning wound, above 9, is staunched.

On the facing page the air view, *a,* shows in rough form what the area would look like if the REVIEW'S proposals were to be implemented. Below, *b,* in comparison is the air view of the central area as it is today showing clearly the uncompromising and disrupting diagonal line of Victoria Street. The arrowed lines draw attention to the positions of visual advantage. The gesture of road realignment is a very small price to pay for the release of so much urban drama. The slow curves of the realigned road will in no way hinder the flow of traffic, and might profitably reduce the speed slightly, for the heart of Westminster visually and symbolically is hardly a stock car racecourse.

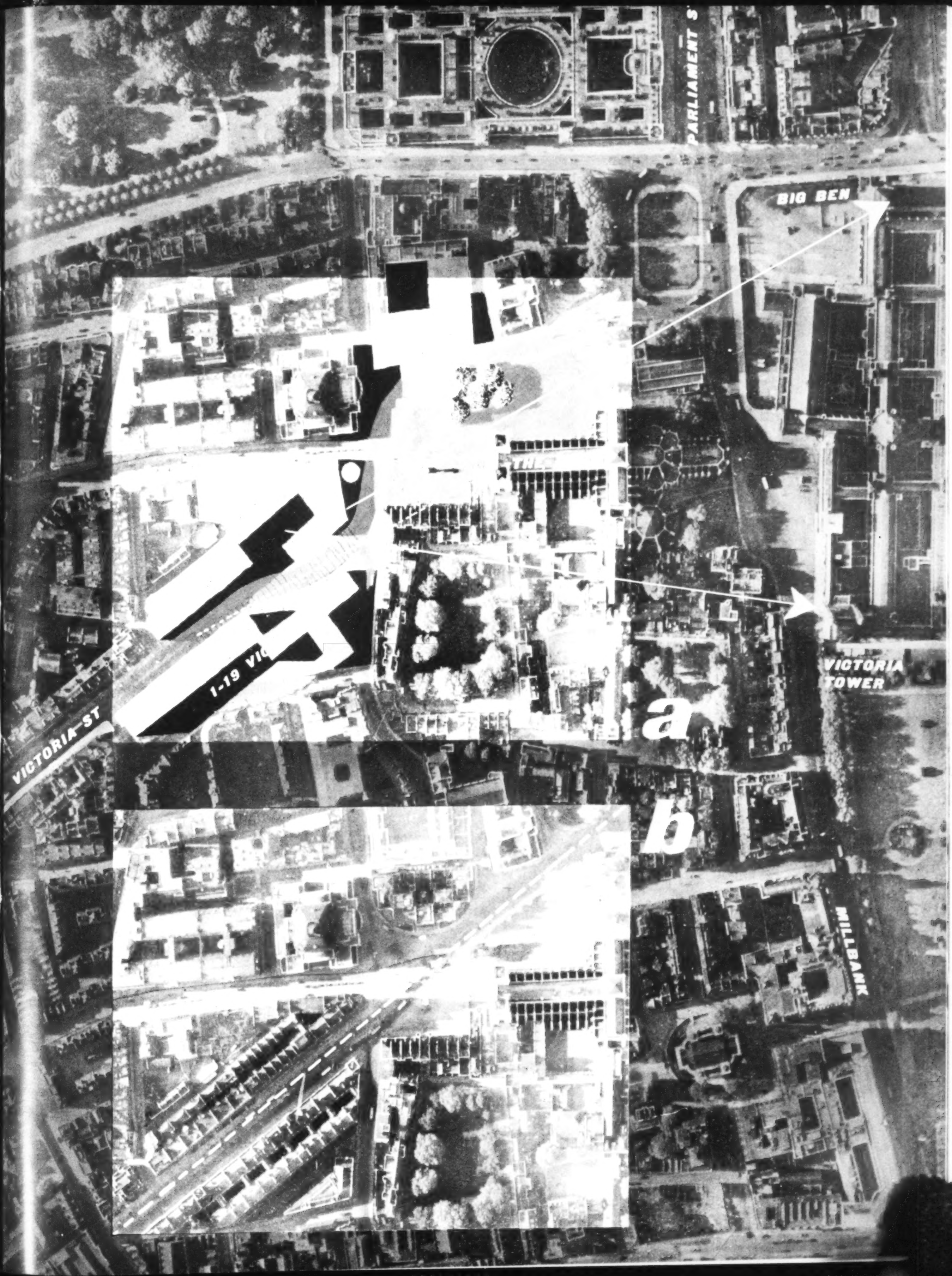


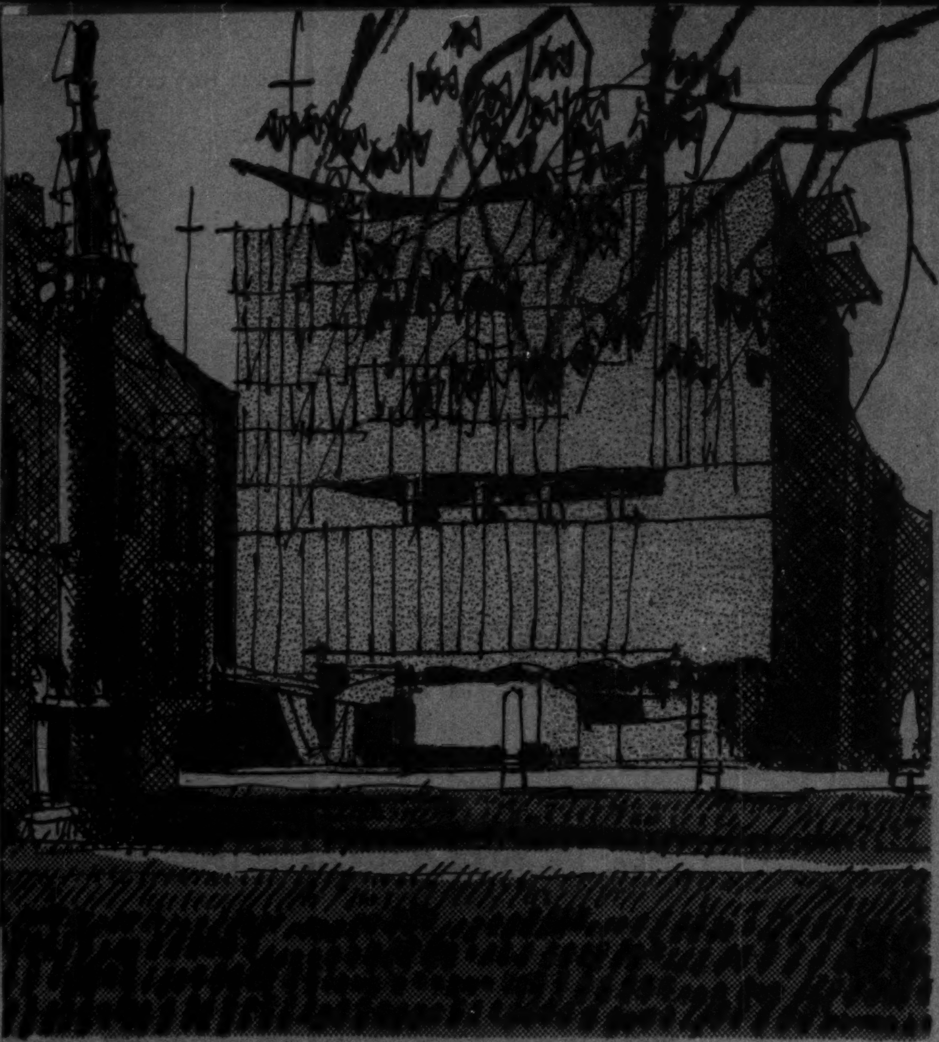
10

Secondly, the available open space has been thrown into the possession of the Abbey. There is a great deal to be said for a ground surface which stretches right up to the black stone buttresses. The further this ground stretches, the further the magic of the Abbey stretches. This ends the present ambivalency, the tendency to split the open space on to both sides of the road and thus reduce its authority, the contrast can be seen in 10 and 11 below.



11


PARLIAMENT ST
BIG BEN
THE
1-19 VIC
VICTORIA ST
a
VICTORIA TOWER
b
MILLBANK



8

9

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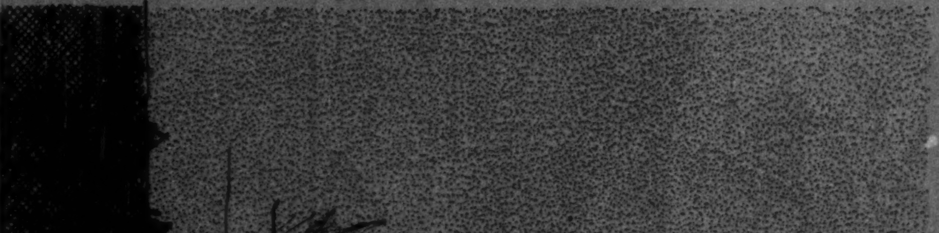
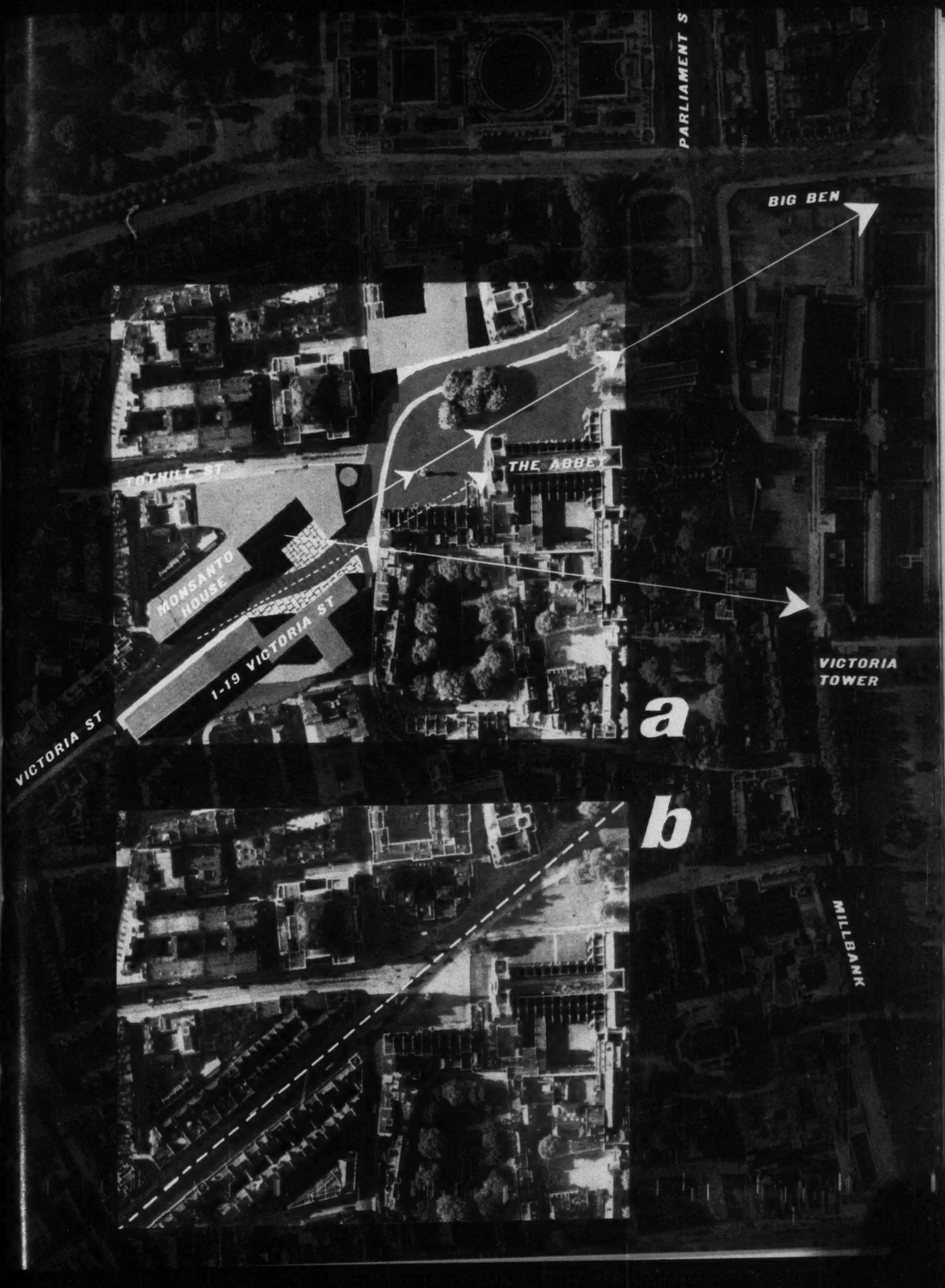


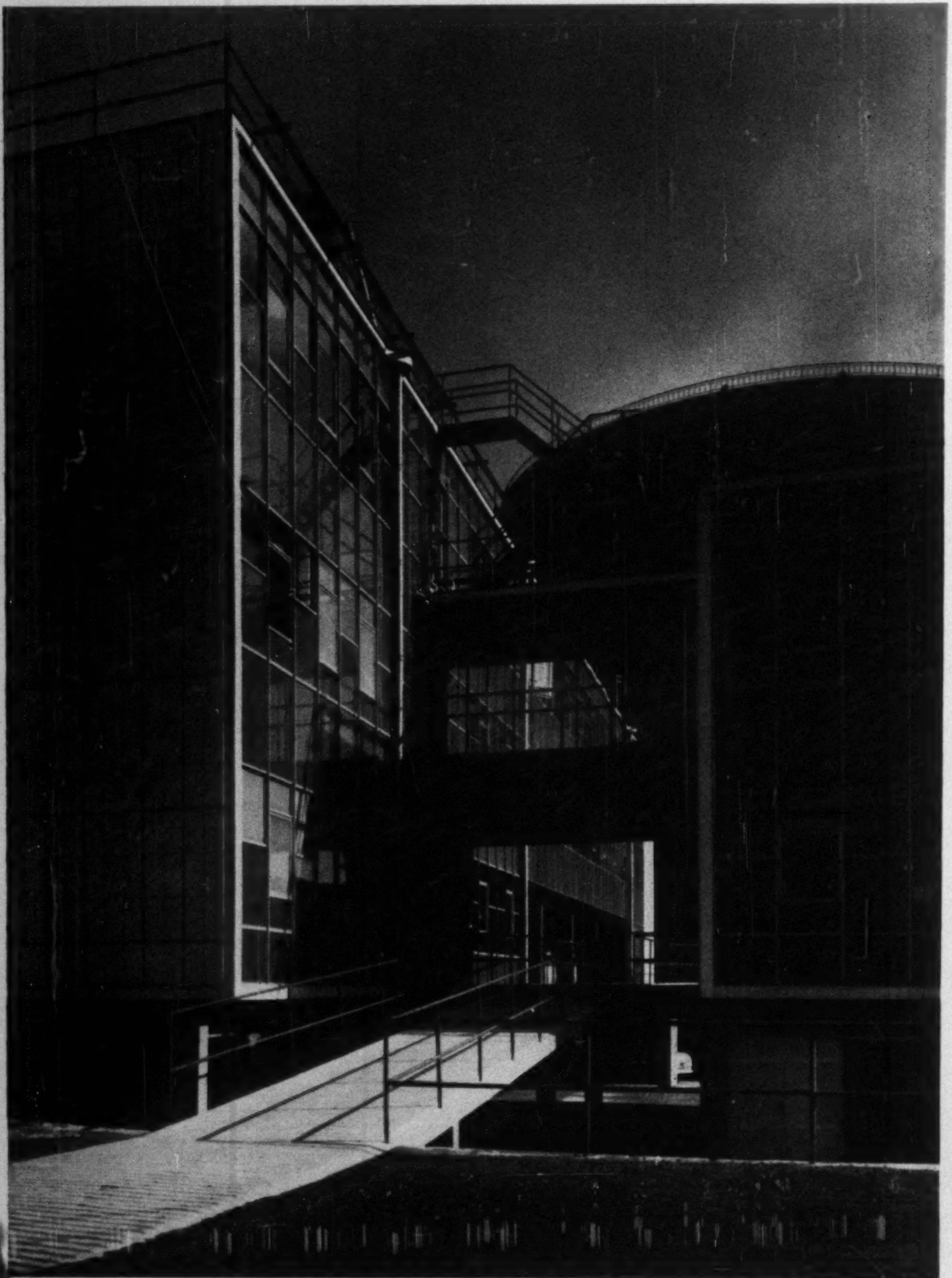
10

11


PARLIAMENT S
BIG BEN
TOTHILL ST
THE ABBEY
MONSANTO HOUSE
1-19 VICTORIA ST
VICTORIA ST
VICTORIA TOWER
a
b
MILLBANK

OFFICES AT BECKTON

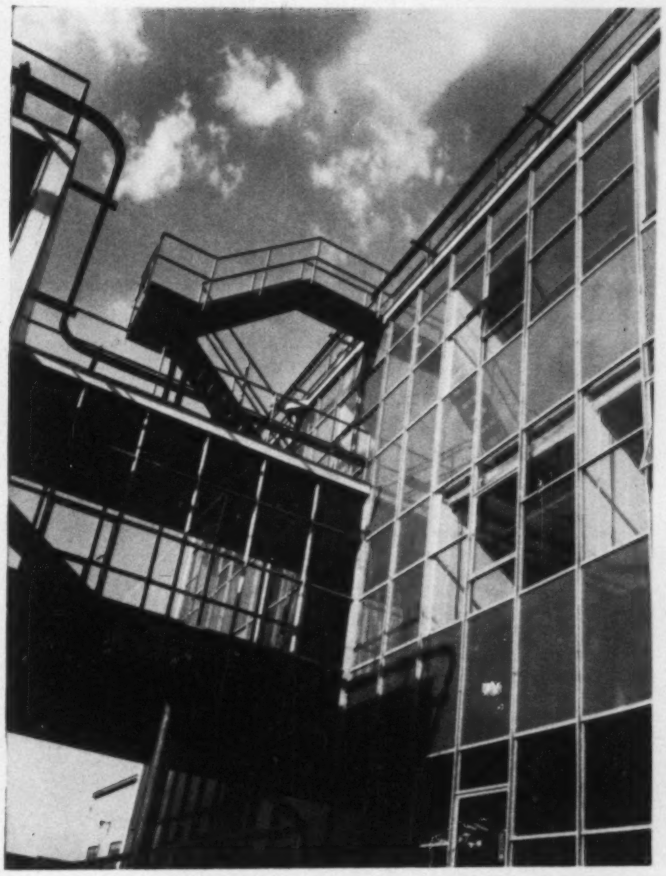
ARCHITECT: ELIE MAYORCAS



1, the link between the two office blocks seen from the west, with the bridge leading to the main entrance, which is at the left on first floor level.

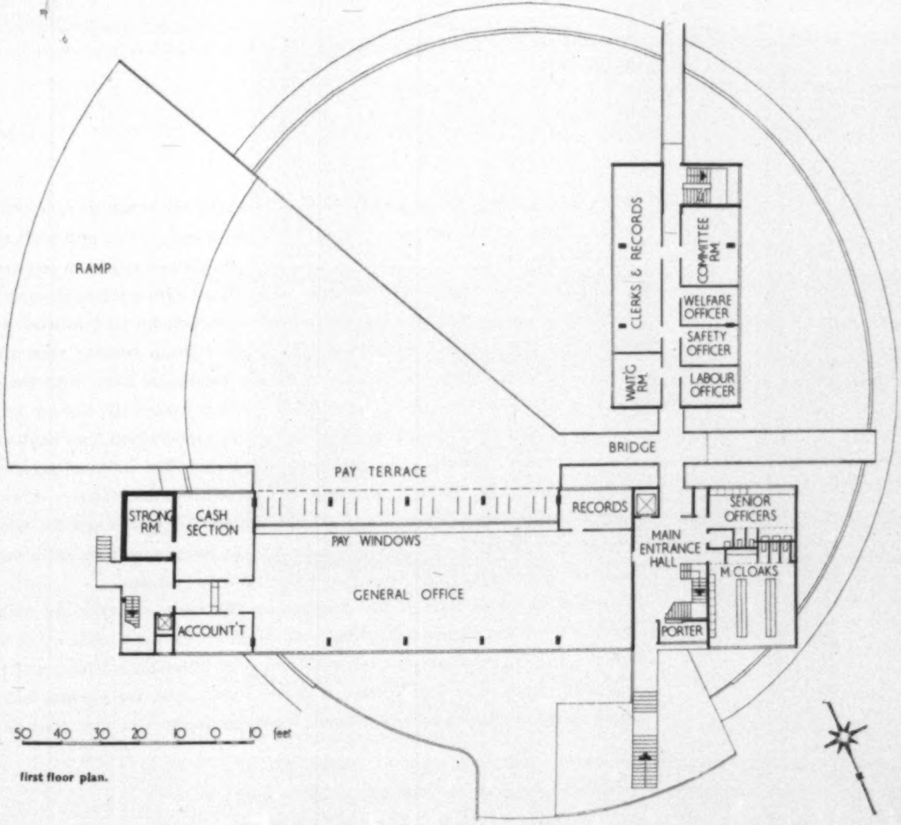
This administration block at Beckton Gas Works, East Ham, replaces temporary accommodation which had been in use since the original building was blitzed in 1940. It houses the station engineering staff and counting house and includes canteen and games rooms and an underground emergency works control room.

The site faces the main approach road and is a disused gas holder foundation, consisting of a cylinder approximately 200 ft. internal diameter and 30 ft. deep at the perimeter, with a raised central dumpling, the whole built in mass concrete backed by puddled clay. The surrounding ground is waterlogged and of very poor bearing quality. Provision of the lightest and airiest possible working conditions in the centre of an industrial area was the aim. The building has been designed to allow for future expansion by the addition of two floors on each wing.

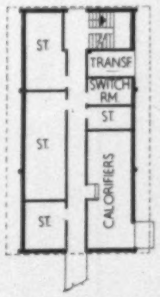


2, detail of the glazed link and the curtain walling of the main block from the east.

Offices at Beckton


RAMP
CLERKS & RECORDS
COMMITTEE RM.
WELFARE OFFICER
SAFETY OFFICER
LABOUR OFFICER
WAIT'G RM.
BRIDGE
PAY TERRACE
STRONG RM.
CASH SECTION
PAY WINDOWS
RECORDS
SENIOR OFFICERS
MAIN ENTRANCE HALL
M. CLOAKS
GENERAL OFFICE
ACCOUNT'T
PORTER
50 40 30 20 10 0 10 feet

first floor plan.


ST.
TRANSF
SWITCH RM.
ST.
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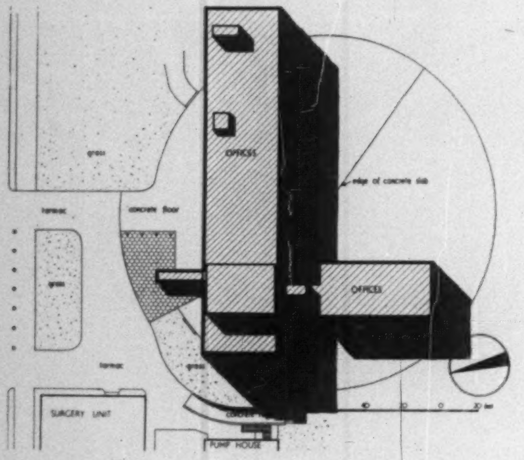
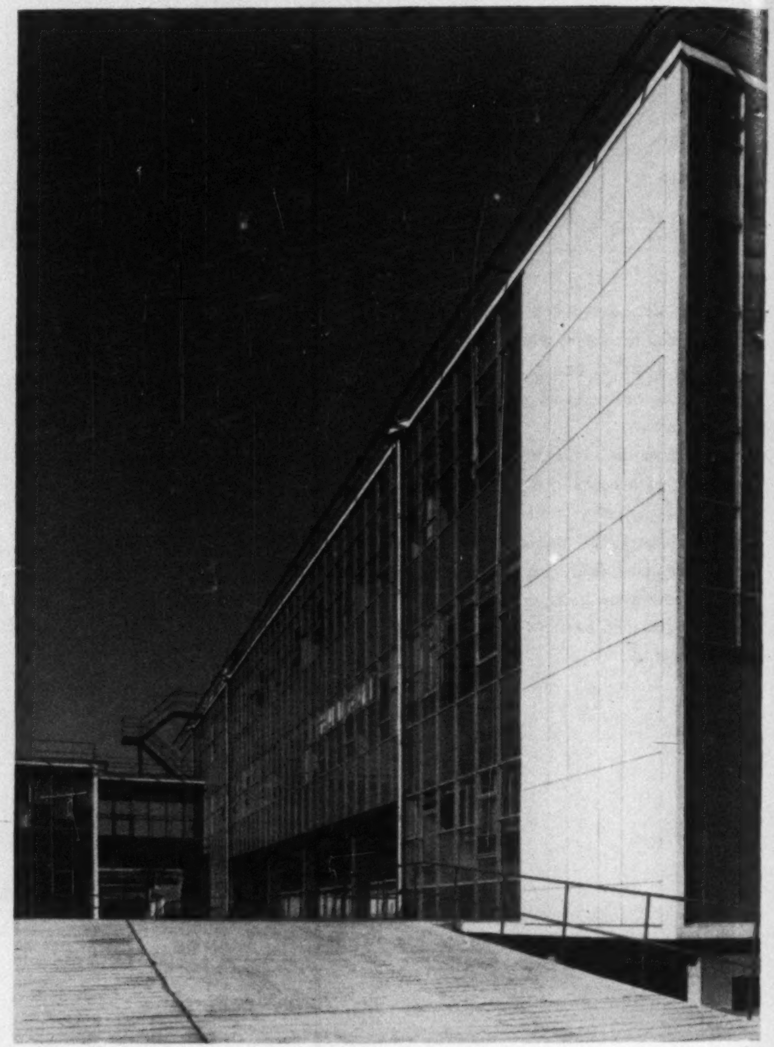
ground floor plan.

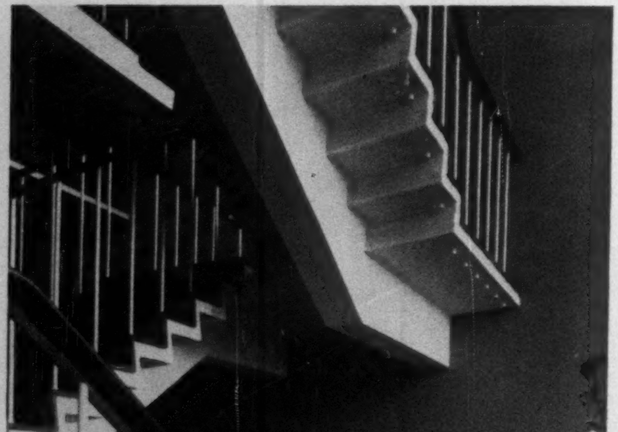
Offices at Beckton



site plan



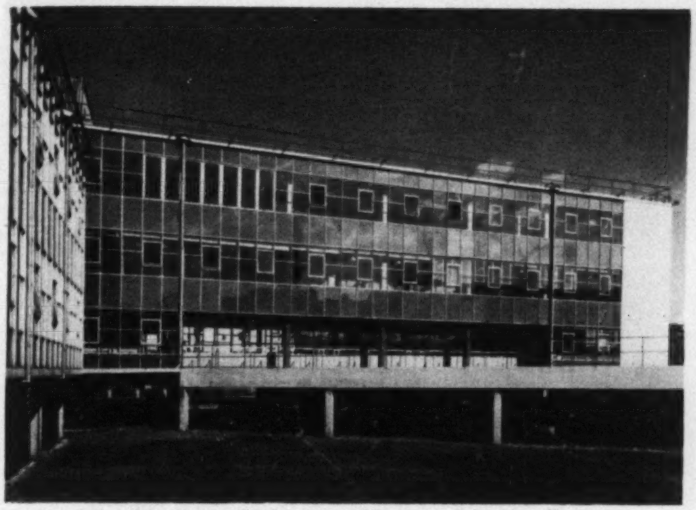
3, main office block from the ramp leading up to the pay terrace which is recessed under the facade of the building.



4, detail of staircase.

The entire building is designed on a 40-in. module: the structure is a monolithic reinforced concrete frame with reinforced concrete floors and roofs and hollow-pot infilling, with the frame supported on precast reinforced concrete piled foundations. Staircases and fire break walls are also reinforced concrete monolithic with the structural carcase, but shuttered up and formed subsequently. The external cladding is aluminium curtain walling with infill backed spandrel panels; the concrete walls are externally faced with faience slabs, while the penthouse on the main roof, which houses the storage tanks and ventilation plant, etc., is steel framed for future removal, and clad with aluminium sheeting and decking and patent glazing. The internal partitions are generally 2 in. thick, lightweight demountable units, formed of compressed straw and hardboard facing with timber 'dropper' units for wiring chases. The flush doors are veneered in African mahogany with satin silver anodized ironmongery and mahogany door frames or linings.

Thermoplastic tiles with in situ terrazzo on the main staircase are mainly used for the floors. Suspended ceilings over all office areas are aluminium panels, left natural; the roofs are covered with multi-ply bituminous felting and tarmacadam finish. The Pay Terrace is finished with 2 in. tar paving, laid on top of a rubber bituminous membrane, incorporating woven fibre glass cloth.



5, *general view from the south, showing parking space below the offices.*

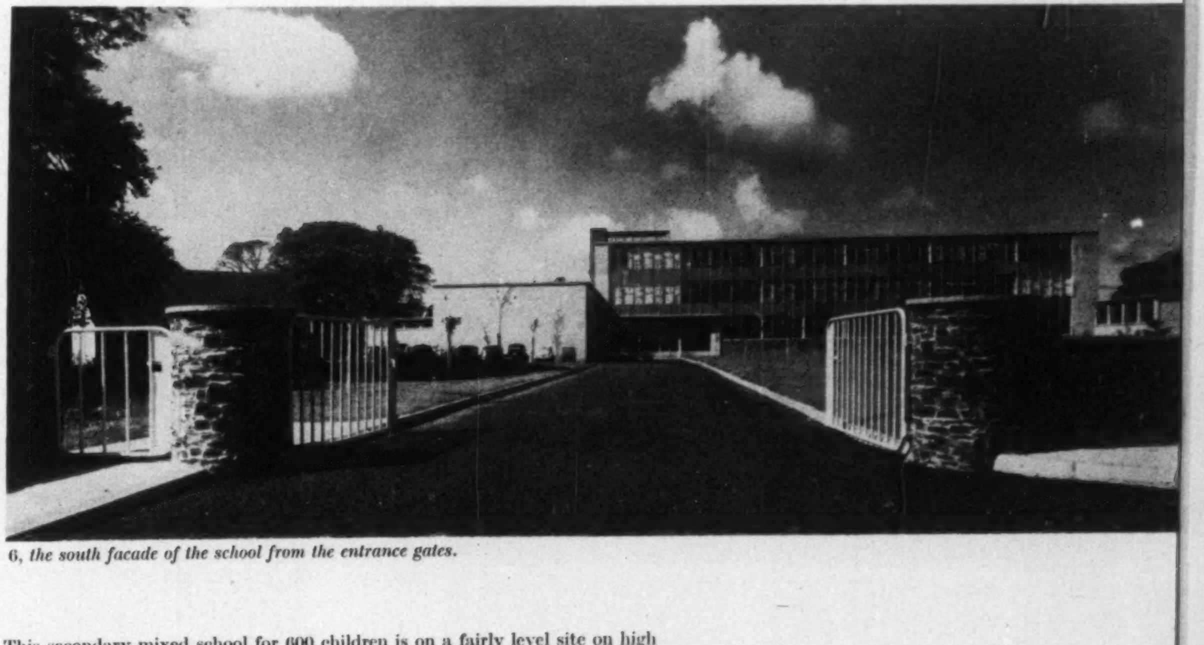
Offices at Beckton

Steam from the works provides the domestic hot water and heating. There is mechanical ventilation and heating is by the plenum system. There are also radiant heating panels in the ceiling soffits of the offices, to offset heat losses through the fabric of the building. Lighting is mainly fluorescent. Service pipes, ducts, etc., are concealed in the space between the suspended ceilings and soffit of the floor slabs, the beams being specially designed to permit their passage. The ceiling panels are removable for access to services. Telephone services are run in fibre ducting laid in the floor screed, to give flexibility for future connections.

SCHOOL AT WADEBRIDGE

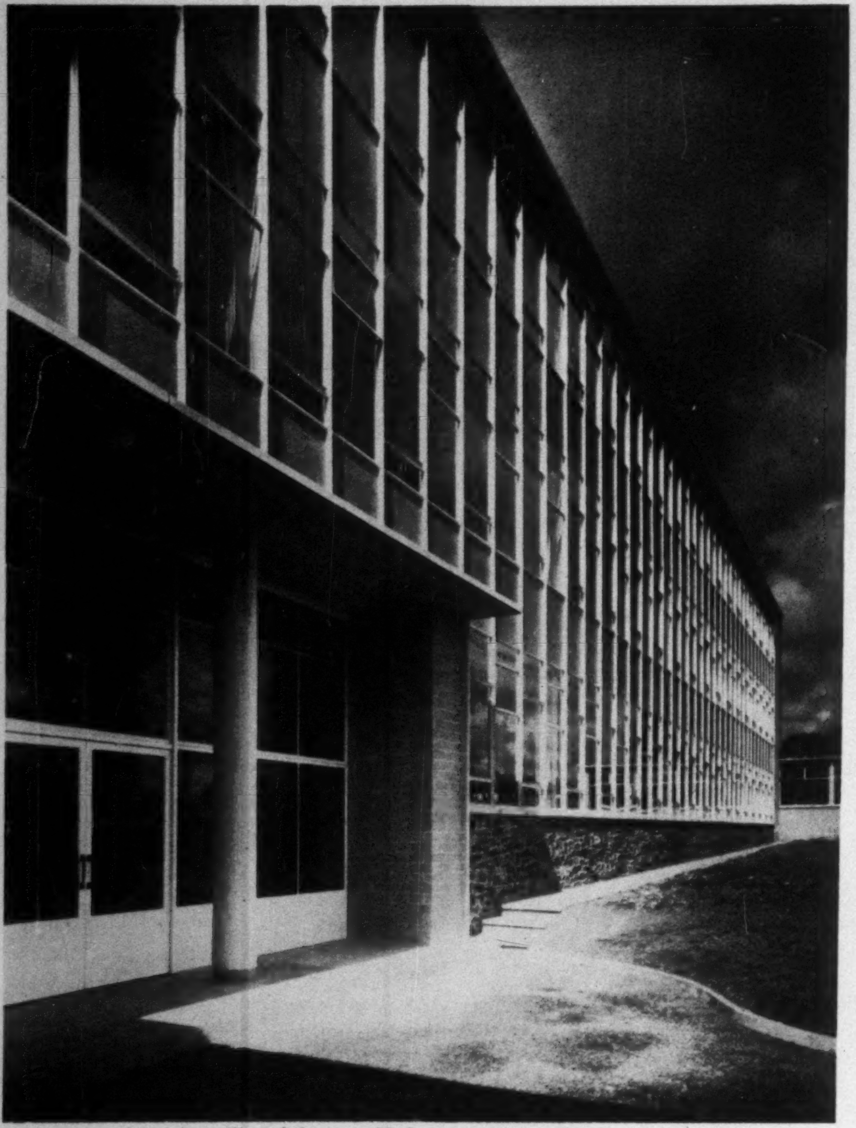
ARCHITECT: F. K. HICKLIN, COUNTY ARCHITECT

ARCHITECT-IN-CHARGE: H. DOOTSON

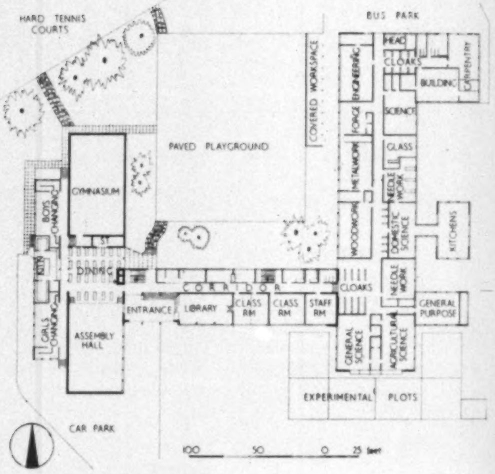


6, *the south facade of the school from the entrance gates.*

This secondary mixed school for 600 children is on a fairly level site on high ground north of Wadebridge, with a very gentle slope to the west. For a number of years the secondary school will remain 3-form entry and the remainder of the building is used for further education. Most of the teaching spaces face south in one three-storey block served by staircases at either end. The assembly block contains the gymnasium and assembly hall, separated by a



7, entrance and curtain walling of classroom block.


HARD TENNIS COURTS
BUS PARK
HEAD
CLOAKS
CARPENTRY
BUILDING
ENGINEERING
COVERED WORKSPACE
SCIENCE
FORGE
PAVED PLAYGROUND
CLASS
GYMNASIUM
METALWORK
NEEDLE WORK
BOYS CHANGING
DOMESTIC SCIENCE
WOODWORK
KITCHENS
ST
DINING
CORRIDOR
CLOAKS
NEEDLE WORK
ENTRANCE
LIBRARY
CLASS RM
CLASS RM
STAFF RM
GENERAL PURPOSE
GIRLS CHANGING
ASSEMBLY HALL
GENERAL SCIENCE
AGRICULTURAL SCIENCE
EXPERIMENTAL PLOTS
CAR PARK
100
50
0
25 feet

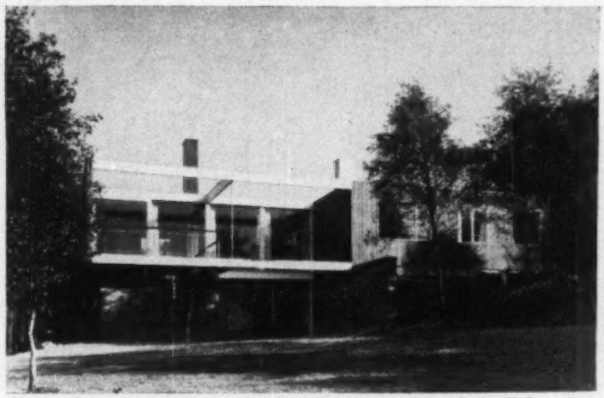
ground floor plan

very large stage, which is used for dining; practical accommodation and workshops, temporarily used for further education, are in a single-storey block to the east of the site. The building generally is of cross wall construction, which has proved to be very economical, roofed with lightweight concrete slabs on timber joists. The principal facing material is reconstructed stone, but some local natural stone has been used in panels. Heating is by radiators, with air heaters to the assembly hall and gymnasium only. The boilers are oil fired.

8, entrance hall with library beyond and stairs leading to assembly hall on left.

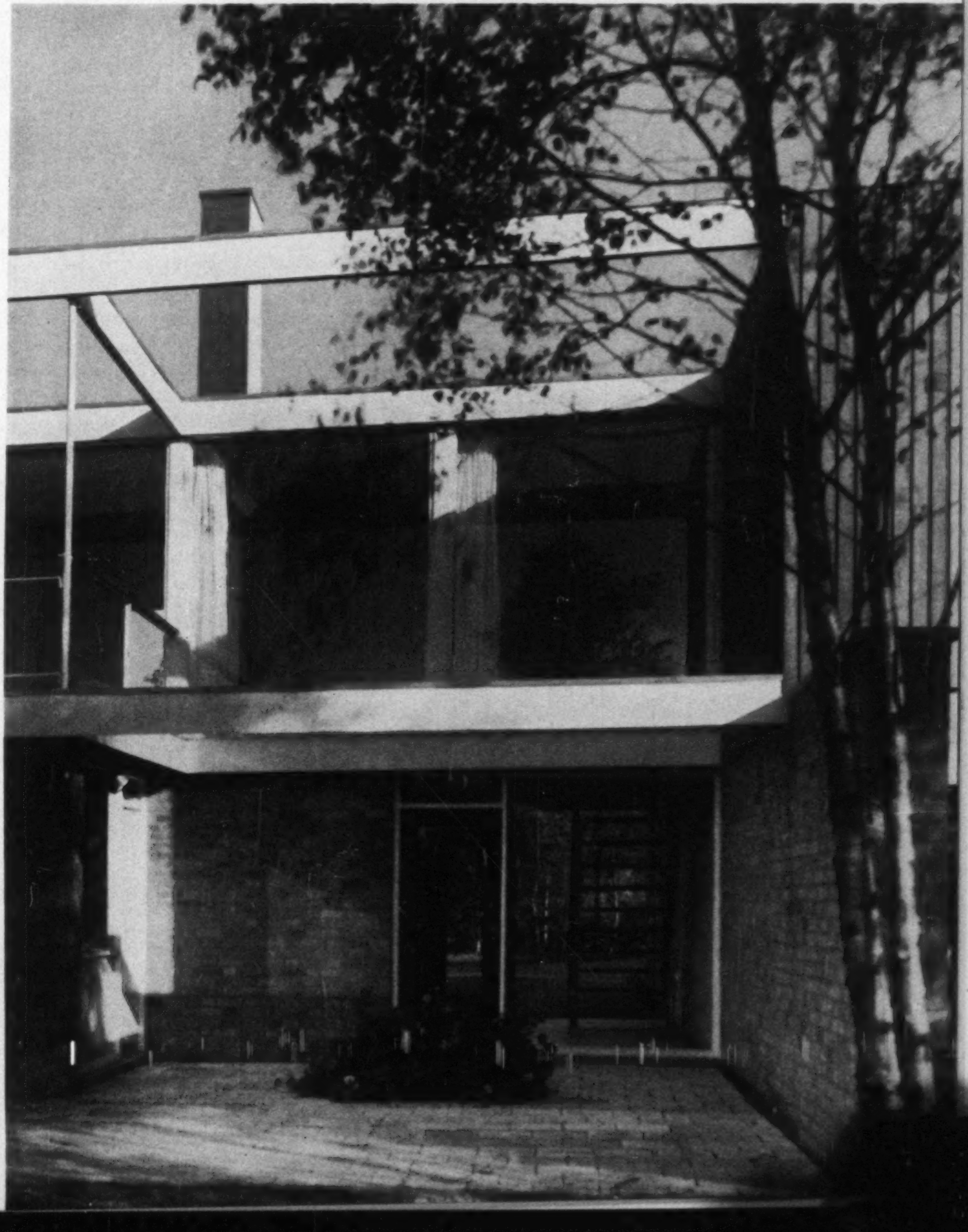
HOUSE AT NEWSTEAD ABBEY

ARCHITECTS: BARTLETT AND GRAY



9, view from the north-west showing the continuation of the living room wall along the terrace to form a wind screen.

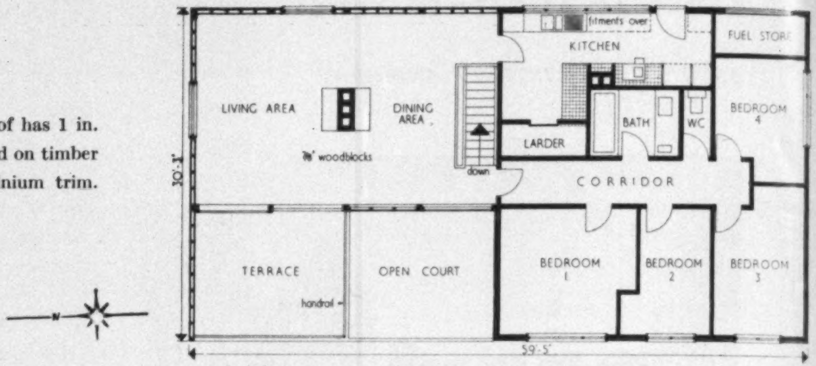
The house is on an eleven-acre wooded site near Newstead Abbey, between Nottingham and Mansfield, with views to west, east and north. It provides four bedrooms and a living-dining area made as large as possible, connecting with an open court and a terrace facing west, all on the upper floor; the living room wall is continued along the north side as a wind screen. The lower floor contains garage, workshop and hall and is built on 4 in. lightweight loadbearing blocks; the upper floor is clad with 1 in. tongue and groove boarding on 2 in. by 1 in. battens, incorporating top and side hung timber framed opening



10, detail of the open courtyard, showing the hall and the open staircase leading to the main rooms on the first floor.

House at Newstead Abbey

lights. The first floor is 7½ in. *in situ* reinforced concrete: the roof has 1 in. tongue and groove boarding with glass wool blanket insulation laid on timber joists, finished with three layers of bituminous felt and aluminium trim. The contract price was £5,945.



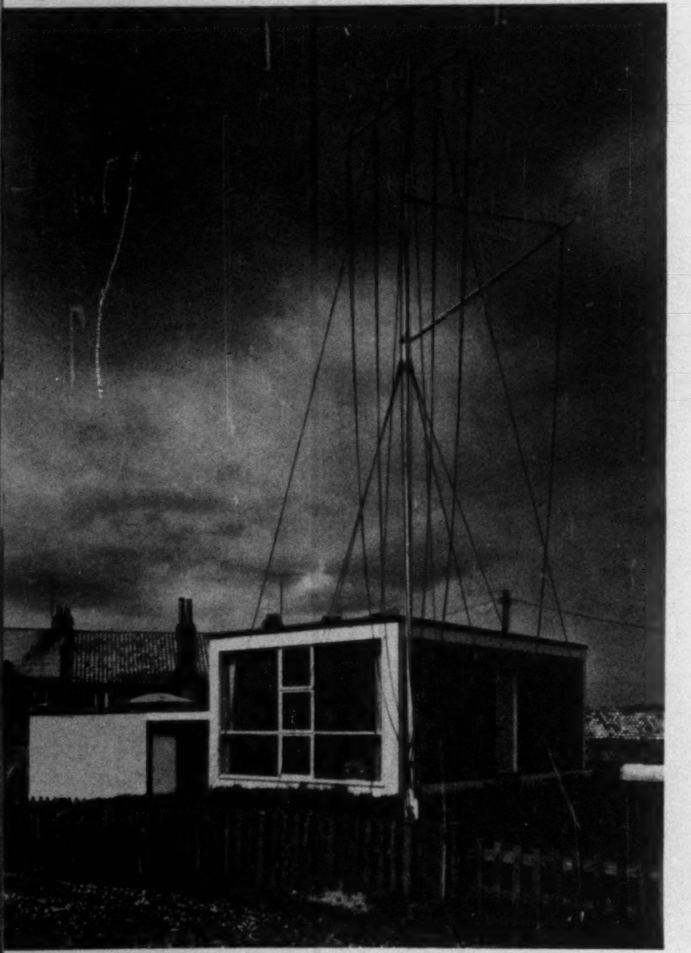
N
LIVING AREA
DINING AREA
woodblocks
down
KITCHEN
fitments over
FUEL STORE
BEDROOM 4
BATH
WC
LARDER
CORRIDOR
TERRACE
OPEN COURT
handrail
BEDROOM 1
BEDROOM 2
BEDROOM 3
30'-3"
59'-5"

upper level plan.

SAILING CLUB AT BEADNELL

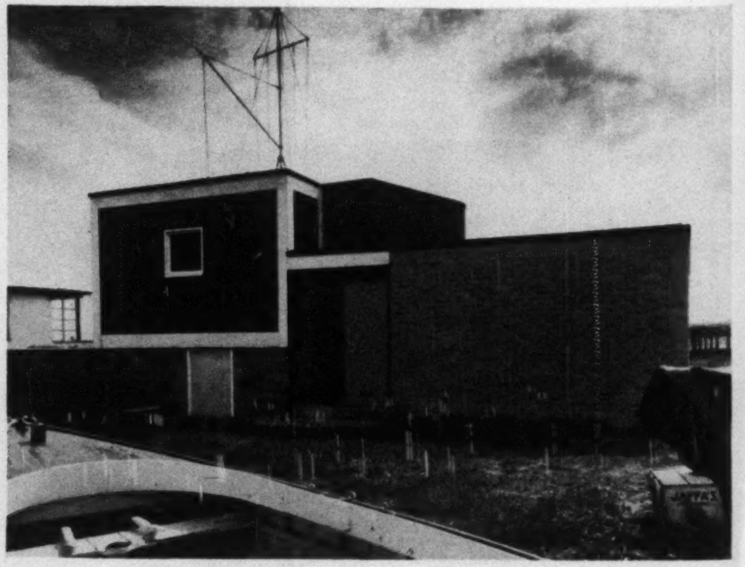
ARCHITECTS: RYDER AND YATES

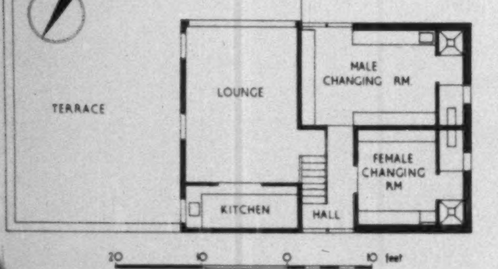
This sailing club was built for £1,300 on a site half way up the Northumberland coast with a main view over the sandhills to Dunstanburgh Castle. The requirements were for a club lounge, two changing rooms (male and female), a small entrance hall and a store for spars and sails. To gain a view over the sandhills it was necessary to raise the floor of the lounge 5 ft. above the general level of the site; the space under this raised floor was used for storage. The low level, consisting of entrance hall and changing rooms is built of brickwork on a concrete floor; the lounge is timber boarded on a wood frame raised on a random rubble plinth that forms the walls of the store. The woodwork is painted black and white and the doors are yellow ochre. The roof of felt is in two colours: the flat surfaces are green and the vertical faces of the curved tank room are dark red.



11, *view from the south-east with the large lounge window looking onto the dunes.*

12, *north elevation of the club.*





TERRACE
LOUNGE
MALE CHANGING RM.
FEMALE CHANGING RM
KITCHEN
HALL
20
10
0
10 feet

ground floor plan.

BOOKS

LAST OF THE GIANTS

ISAMBARD KINGDOM BRUNEL. *By L. T. C. Rolt. Longmans, Green and Co. 25s.*

Brunel, who, like the mercurial Pugin, was half-English and half-French, was a dramatic and colourful figure in a dramatic and colourful age and it is a surprising thing that no one has written his complete life story before—not even the moralising Smiles.

It is true that his eldest son wrote a biography of a heavy, filial piety which appeared in 1870 and that in 1938 there was published the family tribute, *The Brunels, Father and Son*, written by I. K. Brunel's grand-daughter, Lady Noble; but these are limited and incomplete. Now Mr. Rolt, an engineer turned writer who first gained fame with his best-selling *Narrow Boat*, has produced a workmanlike, well-organized and gripping story in this his first biography, for which he has drawn largely on original and unpublished sources.

The tale is told simply and without affectation. It not only deals with the engineering works—the Great Western Railway (with its masterly bridges, its revolutionary broad gauge and its cathedral-like terminus at Paddington), the three iron ships, the prefabricated hospital buildings for the Crimea, the unfinished Clifton Bridge—but it reveals, as no other work has done so far, the vivid personality of the diminutive body who was a giant in an age of giants, one of those men who were never afraid of bold experiment, of bearing with fortitude enormous burdens of responsibility, and of generating a driving, purposive enthusiasm which could carry them through years of arduous labour, continual and uncomfortable travel, physical danger and very little sleep.

The book gives us an early and revealing sight of Brunel when, at the age of twenty, he had taken over from his ageing father the supervision of the construction of the Thames Tunnel. The river water suddenly burst into the Great Bore, as it had been called, and young Brunel, though half-drowned, badly injured and quite resigned to dying, was able to appreciate the scenic effect; for, as he recorded later while recuperating, 'the roar of the rushing water in a confined passage, and by its velocity rushing past the opening was grand, *very grand* . . . the sight and the whole affair was well worth the risk. . . ."

Another revealing glimpse comes in a domestic scene. Brunel had accidentally swallowed a half-sovereign while entertaining the nursery with conjuring tricks and he was slowly choking to death. An operation on the wind pipe proved useless and he then applied his engineering skill by devising an apparatus which whirled him round violently, finally dislodging the coin by centrifugal force.

We see him staunchly fighting through the years for his broad gauge line; supervising the raising of one of the enormous bow trusses on his Saltash Bridge in a tense atmosphere of silence; accepting defeat at last on his abortive atmospheric railway in the west country; hurling sarcastic remarks at the dull, timid and obstructive bureaucrats of the Admiralty whom he heartily despised; finally we see him as a dying man determined to survive until his last and greatest 'chateau d'Espagne,' the *Great Eastern*, was safely at sea.

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The author concludes on a sad philosophical note: 'The historian of the future will assuredly see Isambard Brunel as the key character of his century, the archtype of the heroic age of the engineer and the last great figure to appear in this, the twilight of the European Renaissance. . . . He and his generation bequeathed a sum of knowledge which, like his great ship, had become too large and too complicated to be mastered any longer by one mind. Consequently, all scientific and technical development thereafter depended upon specialization to an ever increasing extent. The result has been that while the collective sum of knowledge has continued to increase at a prodigious rate the individual sum has so seriously diminished that, to paraphrase Goldsmith, while machines have multiplied, men have decayed . . . the process of specialization has by perpetual reduction destroyed that catholicity of intellect without which civilization cannot survive.'

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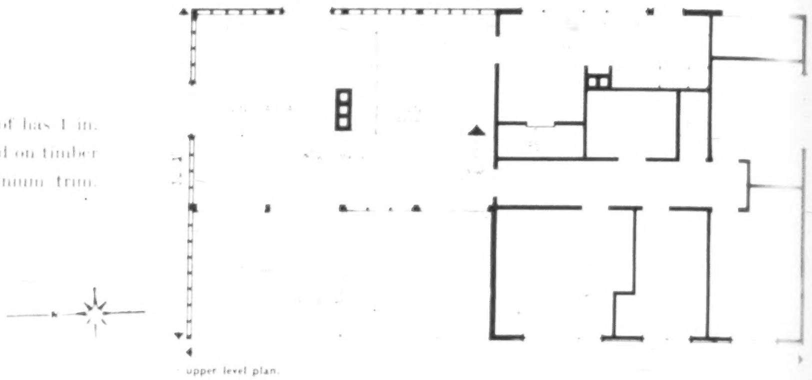
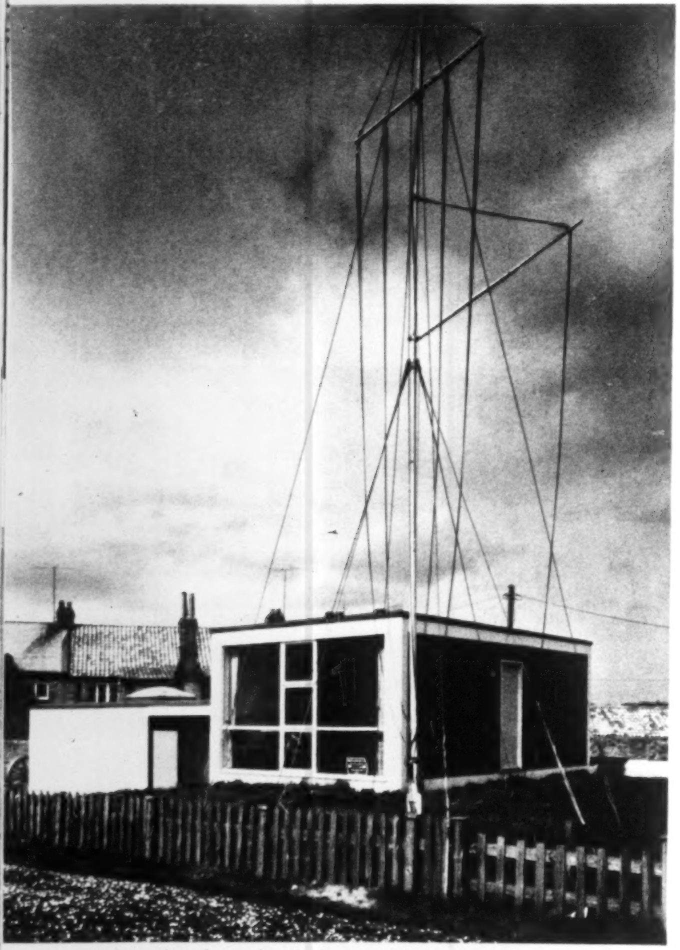
House at Newstead Abbey

lights. The first floor is 7½ in. *in situ* reinforced concrete; the roof has 1 in. tongue and groove boarding with glass wool blanket insulation laid on timber joists, finished with three layers of bituminous felt and aluminum trim. The contract price was £5,945.

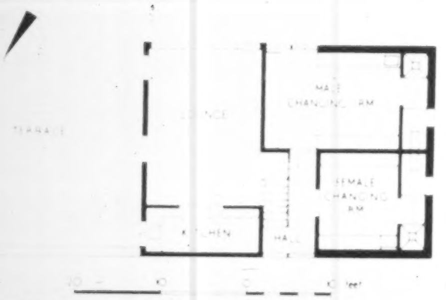

upper level plan.


11, *view from the south-east with the large lounge window looking onto the dunes.*

SAILING CLUB AT BEADNELL

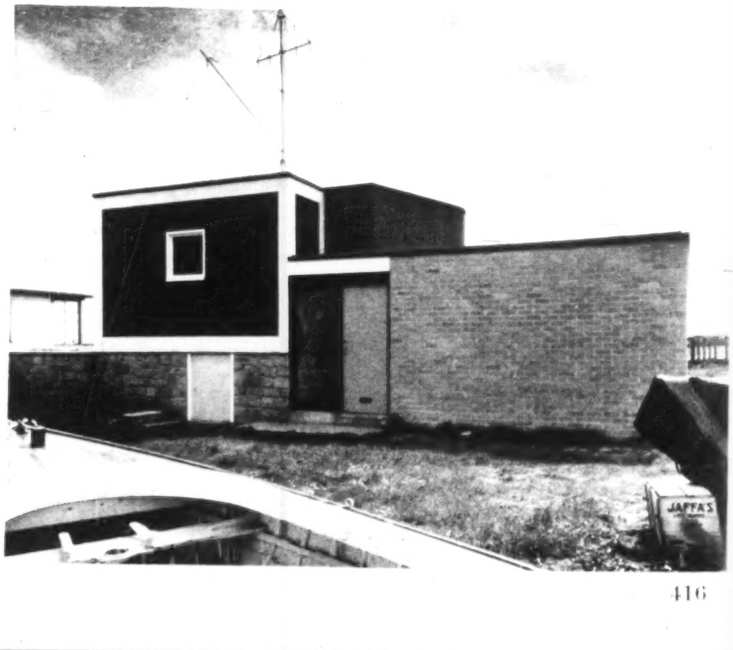
ARCHITECTS: RYDER AND YATES

This sailing club was built for £1,300 on a site half way up the Northumberland coast with a main view over the sandhills to Dunstanburgh Castle. The requirements were for a club lounge, two changing rooms (male and female), a small entrance hall and a store for spars and sails. To gain a view over the sandhills it was necessary to raise the floor of the lounge 5 ft. above the general level of the site; the space under this raised floor was used for storage. The low level, consisting of entrance hall and changing rooms is built of brickwork on a concrete floor; the lounge is timber boarded on a wood frame raised on a random rubble plinth that forms the walls of the store. The woodwork is painted black and white and the doors are yellow ochre. The roof of felt is in two colours: the flat surfaces are green and the vertical faces of the curved tank room are dark red.



ground floor plan.

12, *north elevation of the club.*



The name miscellany implies, of course, an architectural miscellany—one that will include subjects which, though marginal to architecture, are nevertheless vital to it.

miscellany

BOOKS

LAST OF THE GIANTS

ISAMBARD KINGDOM BRUNEL, *By L. T. C. Rolt. Longmans, Green and Co. 25s.*

Brunel, who, like the mercurial Pugin, was half-English and half-French, was a dramatic and colourful figure in a dramatic and colourful age and it is a surprising thing that no one has written his complete life story before—not even the moralising Smiles.

It is true that his eldest son wrote a biography of a heavy, filial piety which appeared in 1870 and that in 1938 there was published the family tribute, *The Brunels, Father and Son*, written by I. K. Brunel's grand-daughter, Lady Noble; but these are limited and incomplete. Now Mr. Rolt, an engineer turned writer who first gained fame with his best-selling *Narrow Boat*, has produced a workmanlike, well-organized and gripping story in this his first biography, for which he has drawn largely on original and unpublished sources.

The tale is told simply and without affectation. It not only deals with the engineering works—the Great Western Railway (with its masterly bridges, its revolutionary broad gauge and its cathedral-like terminus at Paddington), the three iron ships, the prefabricated hospital buildings for the Crimea, the unfinished Clifton Bridge—but it reveals, as no other work has done so far, the vivid personality of the diminutive body who was a giant in an age of giants, one of those men who were never afraid of bold experiment, of bearing with fortitude enormous burdens of responsibility, and of generating a driving, purposive enthusiasm which could carry them through years of arduous labour, continual and uncomfortable travel, physical danger and very little sleep.

The book gives us an early and revealing sight of Brunel when, at the age of twenty, he had taken over from his ageing father the supervision of the construction of the Thames Tunnel. The river water suddenly burst into the Great Bore, as it had been called, and young Brunel, though half-drowned, badly injured and quite resigned to dying, was able to appreciate the scenic effect; for, as he recorded later while recuperating, 'the roar of the rushing water in a confined passage, and by its velocity rushing past the opening was grand, *very grand* . . . the sight and the whole affair was well worth the risk. . . ."

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The book has 115 illustrations in half-tone and 28 in line. Most of the latter are plans, a great asset, as all the old and eight of the new cathedrals are represented in this way. It is a pity, however, that the plans are not reproduced all to the same scale, which could easily have been done. **S.T.S.**

IDEAL PERSPECTIVES

THE VANISHED CITY. *By Oliver Lawson Dick and Robert Carrier. Hutchinson,* 63*s*.

This is mainly a picture-book of 'views'; reproductions of seventeenth- and eighteenth-century engravings, from certain collections in the British Museum, of the London that is gone: palaces and prospects, squares and the river, hospitals and livery companies' halls—with a few added flourishes that never existed at all except in polite perspectives on paper. There is no mud, no Gin Lane. It is a vanished ideal of London, shown in a handsome if somewhat muddled volume for the drawing-room table. Alas for the Georgian Group—few architects are mentioned.

First a grain of salt for the wide-open spaces in these engravings: London was more spacious then—and that is one aspect of the 'Vanished City' we must mourn—but not all that spacious. Lavish perspective was one of the view-maker's favourite props, and nothing enhanced one's pride in a city or a house like an engraved view with a few extra acres thrown in. This book conveys so well that lively inflation of civic and personal pride accompanying the growth of a great city.

Mr. Lawson Dick's narrative is gracefully written in a most digestible folk-tale manner. The well-worn facts are pleasantly interwoven with unfamiliar and curious ones so that they communicate, in the hundred pages allowed him, some sense of the texture of all this panorama.

The publisher's production department has obviously given the book a great deal of care and attention. The 130 engravings selected by Mr. Carrier have been beautifully reproduced by an expensive process on delectable paper, laid out with the text in a way that will perhaps ensure inclusion among next year's Fifty Best Books. But was it ever referred to the publisher's editorial department? Where so much care has been expended, aimed at popular sale in the three-guinea class, must there be sloppy information? Were the comments on Ranelagh and the Pantheon on pages 44 and 53 really made by *Robert* Walpole? Shouldn't even a picture-book be too sophisticated in 1957 to give the York Water Gate to Inigo Jones or the Dorset Gardens Theatre to Wren, or Whitehall masques to a 'Ben Johnson'? And 'Drury Lane Theatre in the Eighteenth Century'—is it Wren's, Adam's, or Holland's? Georgian-fanciers get more sophisticated all the time.

Editors can save authors from blurring things. The text on page 58 is allowed to say that the bridge in St. James's Park 'even today . . . is unexpectedly solid,' so that the Duke of Wellington could trundle guns across in case of Chartist riots. But I think His Grace and the Chartists had gone away before the bridge was built in 1857, and now the bridge has gone away, not being solid enough, perhaps before this book reached page proof. Not every engraving is labelled. If one wonders what a building is, it means scanning the too-short list in front for the page number—if the designer didn't ditch the folio on that page. Admittedly this is a book for the incurious, but people who get interested in the history of London *become* curious. **Priscilla Metcalf**

EXHIBITIONS

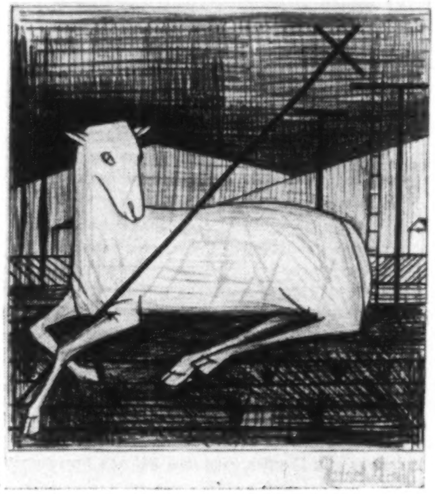
PAINTINGS AND ETCHINGS

When I was trying to think of something favourable to say about the exhibition called 'The Christian Vision,' which opened at the Redfern Gallery in Easter week, I was listening with one ear to a broadcast on the impressive Catholic ceremony of the Tenebræ, held in memory of the darkness that descended upon Golgotha, at which the candles are gradually extinguished until only one remains alight to symbolize Christ as the Light of the World. It brought to mind those marvellous paintings by the seventeenth-century master Georges de la Tour, included in the winter exhibition at Burlington House, in which the figures are illuminated by a solitary candle. La Tour's extraordinary pictorial inventiveness was imbued with a quality that Maritain calls 'prudence' and Berenson calls 'ineloquence,' and his mild but relentless observation of human beings in youth, maturity and old age is transformed by a charitable and simplifying light that is like the promise of redemption.

But La Tour's kind of Christian humanism was already a great rarity in the seventeenth century, as the bulk of the pictures in the Burlington House show all too amply demonstrated, and I mention La Tour's work only to remark upon its remoteness from the atmosphere in which the clutter of twentieth-century Crucifixions, Last Suppers, Depositions and Holy Faces at the Redfern have been produced. The writer of the Redfern Foreword takes an ecclesiastical sniff at this atmosphere and finds that it smells of unregenerated flesh: 'In the breakup of the European idea which has now reached its widest effect the two decisive factors have been, first loss of the Church as the guardian of truth, second the loss of respect for man's true nature—the humanities.' In the context of an exhibition called 'The Christian Vision' he couldn't very well leave it at that, but the full note of triumph in his concluding words is somewhat unexpected: 'That we have among us today artists who have grasped the double principle of divine truths and human dignities is to be seen again and again in the present exhibition.'

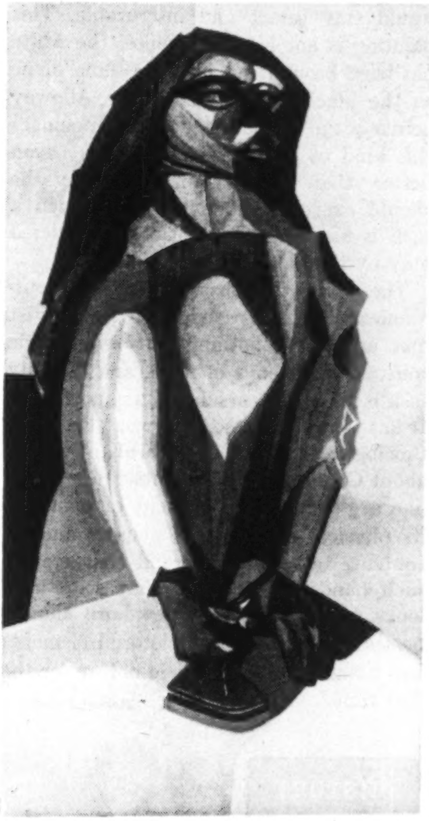
I see it all quite differently: I see these exhibitors as a mixed bunch of cubists, tachists, expressionists and eccentric contortionists pretending to communicate with society by borrowing a symbolism which carries so great a weight of associations that it does its own communicating, regardless of the way in which it is depicted.

Bernard Buffet's cold and vacuously elegant etching of 'The Paschal Lamb,' 1, is, nevertheless, an efficient emblem. On the other hand, Ceri Richards's pleasantly sensual, creamily tachist, faintly figurative picture could do with a conspicuous brass plate on the frame, stating that it's a Deposition; without it, one doesn't instantly recognize this painting as an example of the new Christian Humanism.

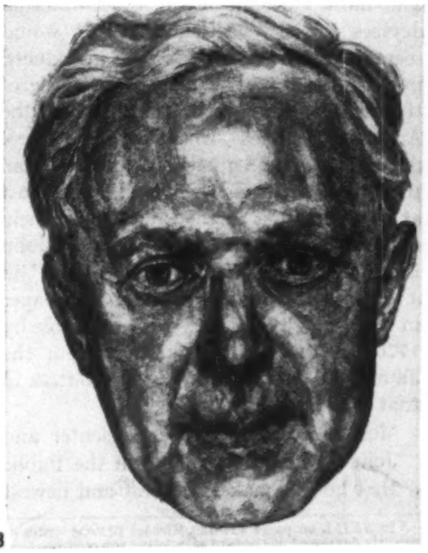

1

From this point of view it's clear that Robert Colquhoun's recent painting of a woman ironing, 2, would easily qualify as the work of an artist who has grasped 'the double principle of divine truths and human dignities': if it were given some such title as 'Christ at the Ironing Board' the shadow on the chin would instantly turn into a beard.

Colquhoun's Retrospective at the Whitechapel Art Gallery looked as effective as most of the shows that are held there, and I imagine that if first-rate presentation and a splendid catalogue were as important as prestige most painters would rather have a Retrospective there than at the Tate. Colquhoun's figurative system, elaborated in the 'forties, was one of the last contributions to the cubo-expressionist synthesis, and I fear that it has lasted no better than any of the others. Consciously or otherwise, all the unnatural-looking formal devices for the figure which stemmed from cubism and vorticism have been expressions of the loss of respect for the idea of mankind's redeemability; but with very few exceptions they have proved to be inadequate vehicles for generalizations about the human condition.


2

Lucian Freud, who recently held an exhibition of portrait heads at Marlborough Fine Arts, has been able to give a much more pursuasive account of the human condition by using an illusionist technique. Most of the illusionist painters of our time are slippery virtuosos who practise their stupid magic for a wealthy and witless section of the community, but in the case of Freud it is the means by which he makes a precise record of his minute scrutiny of the skin and hair covering a living human head. He is still working on the portrait reproduced here, 3, and it is a long way from completion. The thin, slow patches of paint coagulate on his canvas like a major grafting operation, and when the re-made countenance finally emerges it is a spitting image that makes one's mouth go dry, for he deprives the human face of its right to remain half-hidden. He is not cruel, but his neutrality is almost a sin against the Holy Ghost. No one comes out unscathed: exposed to his neutral stare, the men and women who posed for La Tour would become unfit for salvage.


3

I shall never quite forget the misery into which I was plunged, many years ago, by the illustrations in a Victorian edition of 'The Pilgrim's Progress.' They rose up from the pages like rags of cold grey fog, and I did not reach the Celestial City. Now that I have seen at the St. George's Gallery the eighteen large etchings which comprise Peter Peri's 'Pilgrim's Progress Suite,' I shall try again. These plates are full of life and movement and contain many devices no less simple and telling than Belzebub's double shadow (not, I think, mentioned by Bunyan) in the incident at the Wicket Gate, 4. Peri unfolds Christian's journey with a kind of sunlit spaciousness which effectively stops his imaginative presentation of the forces of evil from stealing one's allegiance.

4

Yet another selection from the seemingly inexhaustible Power collection has been on view at the ICA. This time, the pictures were by five Americans—de Kooning, Pollock, Rothko, Still and Kline—and two Europeans—Dubuffet and Tapies. The Tapies looked cleverly confused and is where an unexpected piquancy comes in. Nervi will not admit any intentions of visual creation. He insists that all he does is 'costruire correttamente,' the title of his most recent book. In this he seems curiously detained by the aesthetics of the twenties and early thirties. Perhaps what detains him is the fact that so many little Nervis, for the sake of nothing but novelty, play with the kind of visual thrills which in Nervi's own *oeuvre* are the outcome of close calculation, astringent intellectual discipline and genius. Structural acrobatics is what he calls the Nervism now rampant in most countries. His argument is that with the means of today's technology, pretty well anything can be done, but that the justification of each piece of visual innovation lies in its practical and economic advantages. But, it must be answered, the eye cannot perceive them, and as far as aesthetics are concerned, surely the eye must remain judge. So the reason why Nervi's unprecedented forms in concrete are aesthetically better than the next man's is not that they are correctly constructed but that they are the outcome of genius.

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IDEAL PERSPECTIVES

THE VANISHED CITY. *By Oliver Lawson Dick and Robert Carrier. Hutchinson, 63s.*

This is mainly a picture-book of 'views'; reproductions of seventeenth- and eighteenth-century engravings, from certain collections in the British Museum, of the London that is gone: palaces and prospects, squares and the river, hospitals and livery companies' halls—with a few added flourishes that never existed at all except in polite perspectives on paper. There is no mud, no Gin Lane. It is a vanished ideal of London, shown in a handsome if somewhat muddled volume for the drawing-room table. Alas for the Georgian Group—few architects are mentioned.

First a grain of salt for the wide-open spaces in these engravings: London was more spacious then—and that is one aspect of the 'Vanished City' we must mourn—but not all that spacious. Lavish perspective was one of the view-maker's favourite props, and nothing enhanced one's pride in a city or a house like an engraved view with a few extra acres thrown in. This book conveys so well that lively inflation of civic and personal pride accompanying the growth of a great city.

Mr. Lawson Dick's narrative is gracefully written in a most digestible folk-tale manner. The well-worn facts are pleasantly interwoven with unfamiliar and curious ones so that they communicate, in the hundred pages allowed him, some sense of the texture of all this panorama.

The publisher's production department has obviously given the book a great deal of care and attention. The 130 engravings selected by Mr. Carrier have been beautifully reproduced by an expensive process on delectable paper, laid out with the text in a way that will perhaps ensure inclusion among next year's Fifty Best Books. But was it ever referred to the publisher's editorial department? Where so much care has been expended, aimed at popular sale in the three-guinea class, must there be sloppy information? Were the comments on Ranelagh and the Pantheon on pages 44 and 53 really made by *Robert* Walpole? Shouldn't even a picture-book be too sophisticated in 1957 to give the York Water Gate to Inigo Jones or the Dorset Gardens Theatre to Wren, or Whitehall masques to a 'Ben Johnson'? And 'Drury Lane Theatre in the Eighteenth Century'—is it Wren's, Adam's, or Holland's? Georgian-fanciers get more sophisticated all the time.

Editors can save authors from blurring things. The text on page 58 is allowed to say that the bridge in St. James's Park 'even today . . . is unexpectedly solid,' so that the Duke of Wellington could trundle guns across in case of Chartist riots. But I think His Grace and the Chartists had gone away before the bridge was built in 1857, and now the bridge has gone away, not being solid enough, perhaps before this book reached page proof. Not every engraving is labelled. If one wonders what a building is, it means scanning the too-short list in front for the page number—if the designer didn't ditch the folio on that page. Admittedly this is a book for the incurious, but people who get interested in the history of London *become* curious.

Priscilla Metcalf

EXHIBITIONS

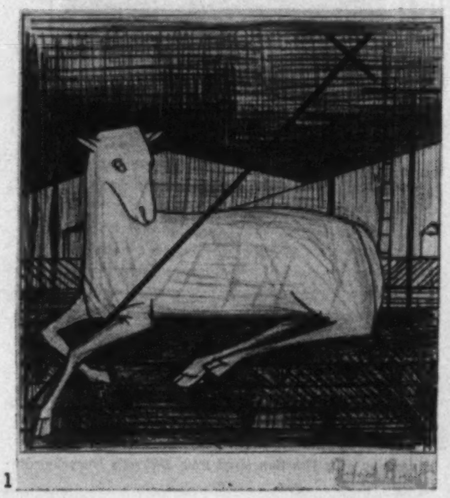
PAINTINGS AND ETCHINGS

When I was trying to think of something favourable to say about the exhibition called 'The Christian Vision,' which opened at the Redfern Gallery in Easter week, I was listening with one ear to a broadcast on the impressive Catholic ceremony of the Tenebræ, held in memory of the darkness that descended upon Golgotha, at which the candles are gradually extinguished until only one remains alight to symbolize Christ as the Light of the World. It brought to mind those marvellous paintings by the seventeenth-century master Georges de la Tour, included in the winter exhibition at Burlington House, in which the figures are illuminated by a solitary candle. La Tour's extraordinary pictorial inventiveness was imbued with a quality that Maritain calls 'prudence' and Berenson calls 'ineloquence,' and his mild but relentless observation of human beings in youth, maturity and old age is transformed by a charitable and simplifying light that is like the promise of redemption.

But La Tour's kind of Christian humanism was already a great rarity in the seventeenth century, as the bulk of the pictures in the Burlington House show all too amply demonstrated, and I mention La Tour's work only to remark upon its remoteness from the atmosphere in which the clutter of twentieth-century Crucifixions, Last Suppers, Depositions and Holy Faces at the Redfern have been produced. The writer of the Redfern Foreword takes an ecclesiastical sniff at this atmosphere and finds that it smells of unregenerated flesh: 'In the breakup of the European idea which has now reached its widest effect the two decisive factors have been, first loss of the Church as the guardian of truth, second the loss of respect for man's true nature—the humanities.' In the context of an exhibition called 'The Christian Vision' he couldn't very well leave it at that, but the full note of triumph in his concluding words is somewhat unexpected: 'That we have among us today artists who have grasped the double principle of divine truths and human dignities is to be seen again and again in the present exhibition.'

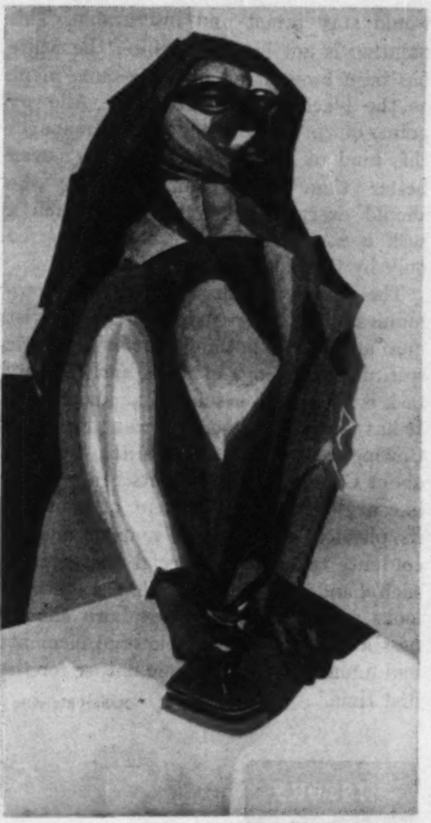
I see it all quite differently: I see these exhibitors as a mixed bunch of cubists, tachists, expressionists and eccentric contortionists pretending to communicate with society by borrowing a symbolism which carries so great a weight of associations that it does its own communicating, regardless of the way in which it is depicted.

Bernard Buffet's cold and vacuously elegant etching of 'The Paschal Lamb,' 1, is, nevertheless, an efficient emblem. On the other hand, Ceri Richards's pleasantly sensual, creamily tachist, faintly figurative picture could do with a conspicuous brass plate on the frame, stating that it's a Deposition; without it, one doesn't instantly recognize this painting as an example of the new Christian Humanism.

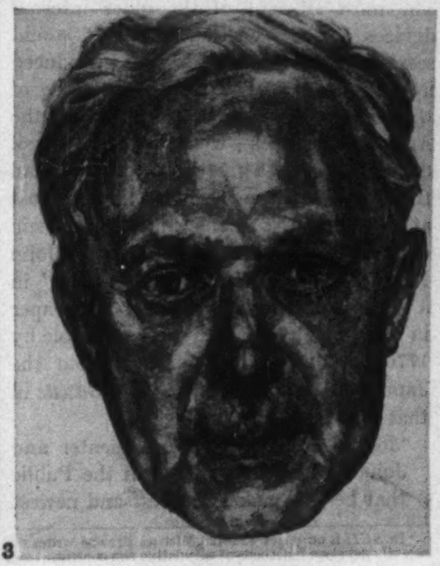

1

From this point of view it's clear that Robert Colquhoun's recent painting of a woman ironing, 2, would easily qualify as the work of an artist who has grasped 'the double principle of divine truths and human dignities': if it were given some such title as 'Christ at the Ironing Board' the shadow on the chin would instantly turn into a beard.

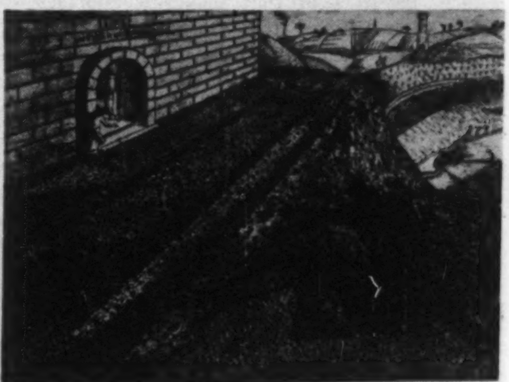
Colquhoun's Retrospective at the Whitechapel Art Gallery looked as effective as most of the shows that are held there, and I imagine that if first-rate presentation and a splendid catalogue were as important as prestige most painters would rather have a Retrospective there than at the Tate. Colquhoun's figurative system, elaborated in the 'forties, was one of the last contributions to the cubo-expressionist synthesis, and I fear that it has lasted no better than any of the others. Consciously or otherwise, all the unnatural-looking formal devices for the figure which stemmed from cubism and vorticism have been expressions of the loss of respect for the idea of mankind's redeemability; but with very few exceptions they have proved to be inadequate vehicles for generalizations about the human condition.


2

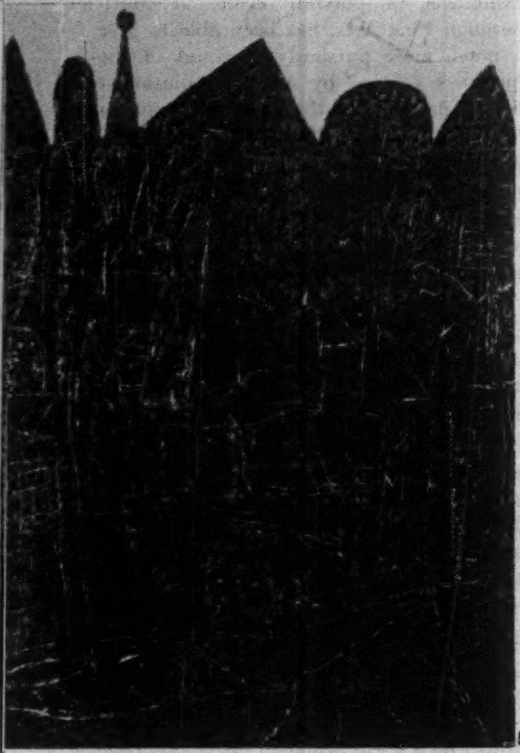
Lucian Freud, who recently held an exhibition of portrait heads at Marlborough Fine Arts, has been able to give a much more pursuasive account of the human condition by using an illusionist technique. Most of the illusionist painters of our time are slippery virtuosos who practise their stupid magic for a wealthy and witless section of the community, but in the case of Freud it is the means by which he makes a precise record of his minute scrutiny of the skin and hair covering a living human head. He is still working on the portrait reproduced here, 3, and it is a long way from completion. The thin, slow patches of paint coagulate on his canvas like a major grafting operation, and when the re-made countenance finally emerges it is a spitting image that makes one's mouth go dry, for he deprives the human face of its right to remain half-hidden. He is not cruel, but his neutrality is almost a sin against the Holy Ghost. No one comes out unscathed: exposed to his neutral stare, the men and women who posed for La Tour would become unfit for salvage.


3

I shall never quite forget the misery into which I was plunged, many years ago, by the illustrations in a Victorian edition of 'The Pilgrim's Progress.' They rose up from the pages like rags of cold grey fog, and I did not reach the Celestial City. Now that I have seen at the St. George's Gallery the eighteen large etchings which comprise Peter Peri's 'Pilgrim's Progress Suite,' I shall try again. These plates are full of life and movement and contain many devices no less simple and telling than Belzebub's double shadow (not, I think, mentioned by Bunyan) in the incident at the Wicket Gate, 4. Peri unfolds Christian's journey with a kind of sunlit spaciousness which effectively stops his imaginative presentation of the forces of evil from stealing one's allegiance.

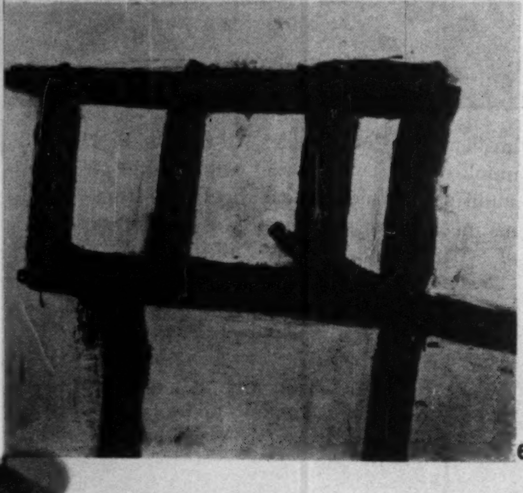

4

Yet another selection from the seemingly inexhaustible Power collection has been on view at the ICA. This time, the pictures were by five Americans—de Kooning, Pollock, Rothko, Still and Kline—and two Europeans—Dubuffet and Tapies. The Tapies looked cleverly confused and



5

vaguely erotic. Dubuffet's 'Facade Landscape,' 5, was a handsome old roué of a picture, and would hold its own in any contemporary European show: in the presence of the New York pictures it looked tired, overworked, over-sophisticated and too derivative. But I reproduce Franz Kline's 'Painting 1952,' 6, without much hope of being able to say why it totally eclipsed the Dubuffet. I do not know how to praise this work. It's in black and white, and the black is without that artful brown hem that makes a Soulages so bewitching. It is stark, unprepossessing and uncommunicative. As far as its uncommunicativeness is concerned, I suppose it wouldn't be difficult to shine a torch in its eyes and get the wobbly black girder-like structure to make false confessions about demolitions, abandoned projects, insecurities, marks on the void and so on, but the picture wouldn't be affected; it would stay intact and inscrutable. This painting is not black on white: the white has been brought up into the same plane as the black, and as Lawrence Alloway points out in the catalogue, Kline manages this kind of backgroundless picture even better than Mondriaan. But why he should exert so much toil upon such a task is something that can be answered only by the picture's own look.



6

The artist who has an itch to communicate is only a pseudo-artist. The artist qua artist has nothing but an esoteric spiritual knowledge of form, and his only task is to go on pursuing that knowledge. It has always been so, and what Professor Gowing recently and so brilliantly said about Georges de la Tour fits Franz Kline like a glove: 'Every element of painting, its physical material, its manner and its content, takes on a special character in such hands, a character that sometimes looks primitive, with a new-born clumsiness about it, as if the pictorial elements had found their own simple nature for the first time.'

Robert Melville

HISTORY

SHUTTERS, BLINDS AND UMBRELLOES

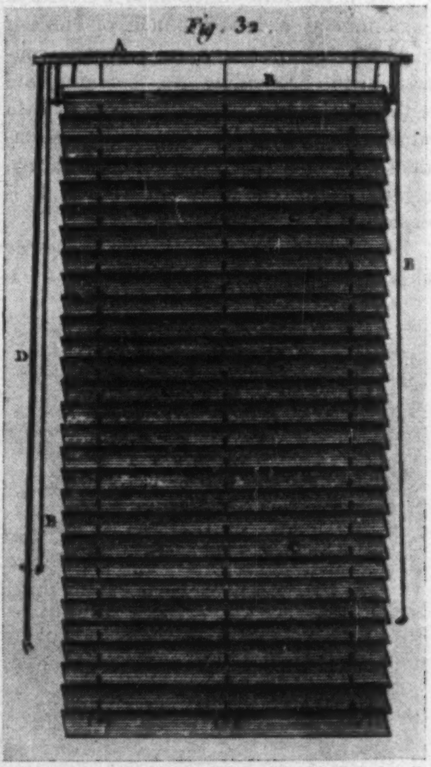
Sun control, in both its functional and its aesthetic aspects, engages the attention of modern architects to an increasing extent, and has been treated more than once in the pages of the* REVIEW. Most methods of sun control, like so much else in contemporary architecture, can be shown to have come down to us in the main stream of the functional tradition.

In general, sun control devices fall into two groups—the internal and the external. The most efficient of the older internal devices is the Venetian blind. It would seem that Venetian blinds were introduced into England shortly after the middle of the eighteenth century. They reached the American colonies—where all sun control devices assumed a greater importance than they had in the mother country—almost at once. The first colonial mention of them occurs in an advertisement placed by John Fisher, 'Cabinet-Maker from London,' in a Charleston, South Carolina, newspaper in 1767; in Virginia they were available by 1770, as the following notice, from the January 18 issue of the *Virginia Gazette* in that year shows:

> 'Joshua Kendall House Carpenter and Joiner Begs leave to Inform the Public that he . . . makes the best and newest invented *Venetian* SUN BLINDS for windows, that move to any position so as to give different lights, they screen from the scorching rays of the sun, draw up as a curtain, prevent being overlooked, give a cool and refreshing air in hot weather, and are the greatest preservatives of furniture of anything of the kind ever invented.'

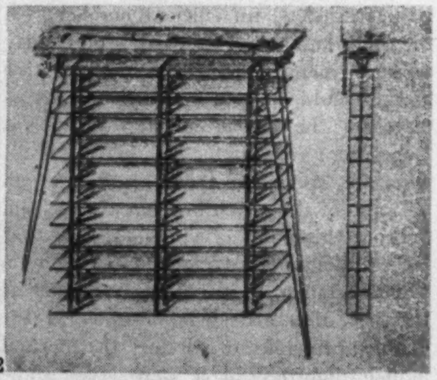
We know what eighteenth-century Venetian blinds looked like and how they worked because both Diderot and Roubo show examples of them in their illustrated encyclopædias, the former in his *Recueil de Planches*, vol. 7, 1, and the latter in vol. 1 of plates of his *L'Art du Menuisier*, 2. Both books were printed in Paris in 1769.

In the eighteenth century Venetian blinds were always placed inside the window. But in 1836 we find Edward



1

1, *drawing of a Venetian blind from Diderot's* Encyclopedie (1769).



2

2, *Roubro's representation of a Venetian blind* (1769). *The Venetian blinds in Christ Church, Philadelphia, some of which are said to have survived from the eighteenth century, are constructed and operate in the same manner as this one.*

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* In *SKILL* on pages 424–428 Michael Brawne writes on recently developed methods of calculating sun control.

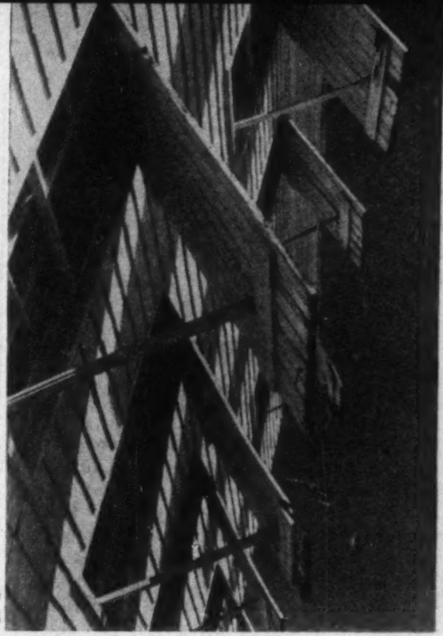
Shaw, in his *Civil Architecture* (Boston) urging that they be placed outside:

> '. . . what we call Venetian blinds ought to be placed on the outside, and not on the inside of our windows. On the inside, they keep off the glare of the sun's rays, but not the heat, which communicates to the air of the room, warming it just as much as if no blind intervened. On the outside, the blinds reflect and repel the heat as well as the light, and the air within the room preserves a desirable coolness of temperature.'

An external jalousie of the sort that Shaw presumably had in mind, serving both to intercept the sun's rays and when lowered to secure the window against entry, is in widespread use in Germany today.

External sun control devices are of greater antiquity, as well as more efficient, than those of the internal group. According to Larousse's *Grand Dictionnaire Universel du XIX Siècle* (1865), awnings hung from the outside heads of window openings were used by the early peoples of the Orient in lieu of window sash; they were at first made of straw matting and later on of goatskin, linen, canvas and other materials. Then there is plenty of evidence that the Romans employed awnings of one sort and another. A mosaic from the Temple of Fortune at Praeneste, dating from between 80 B.C. and A.D. 200, depicts a temple with a great fabric awning depending from its pediment. Again, a Pompeian fresco of the 'fourth style' (A.D. 50–79), now in the National Museum at Naples, shows a circular amphitheatre with a cloth awning suspended over the tiers of seats on one side, such as we know to have been used also over the Colosseum and the theatre at Orange.

4



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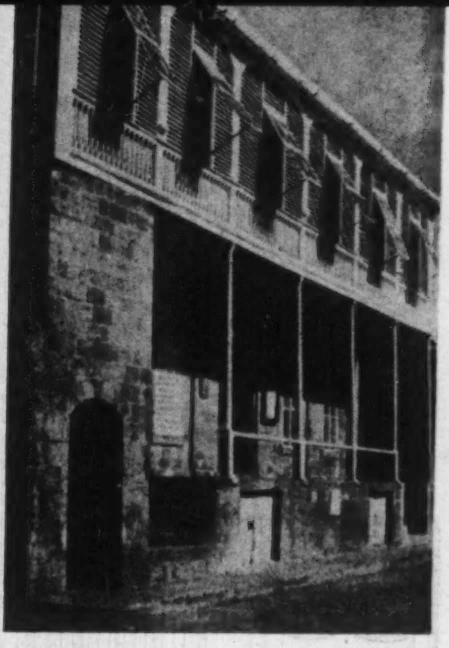

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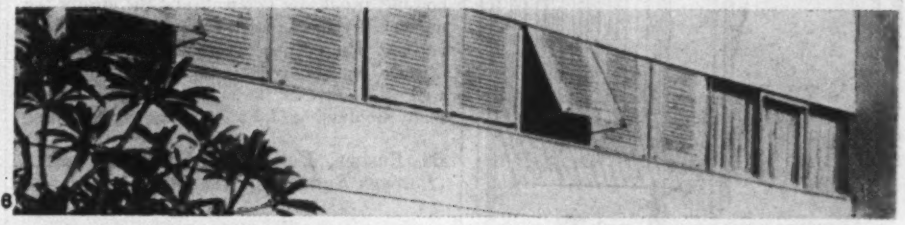
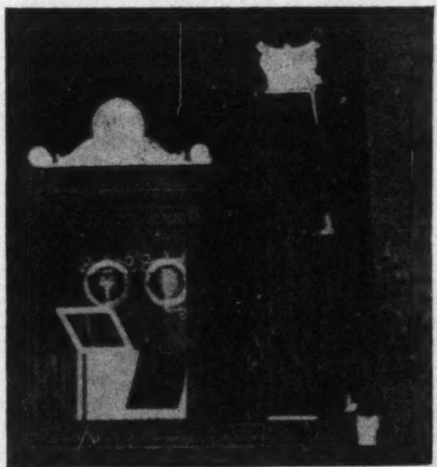


4, top-hinged blinds, in combination with double-hung windows, on a beach house at Nag's Head, North Carolina. When raised, the blind acts as a sun shade; when lowered, in stormy weather, it protects the opening against wind and rain.

5, louvred awning-blinds are used throughout the islands of the Caribbean. This building is the Treasury and Customs office at Charlestown, Nevis.

6, this modern Brazilian house with its row of louvred awning-blinds, above a continuous wall opening, bears a striking resemblance to the Treasury at Charlestown.

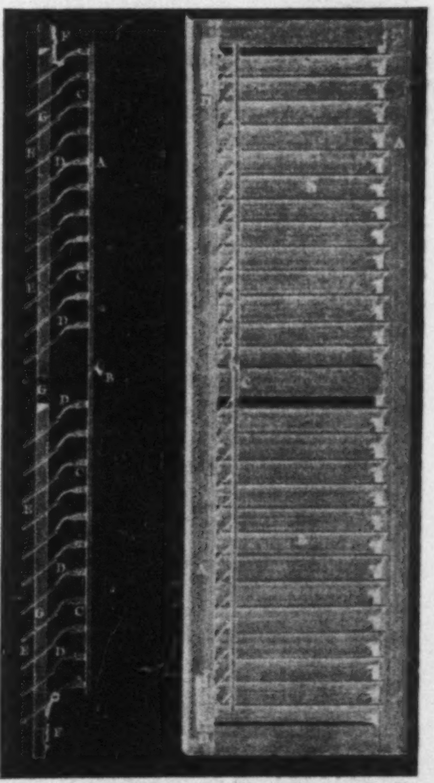


3

3, a version of the Miracle of St. Bernardine by the Master of 1473, in the gallery at Perugia. The painting shows top-hinged blinds in use on unglazed window openings. These rigid awnings are still found in Italy and elsewhere.

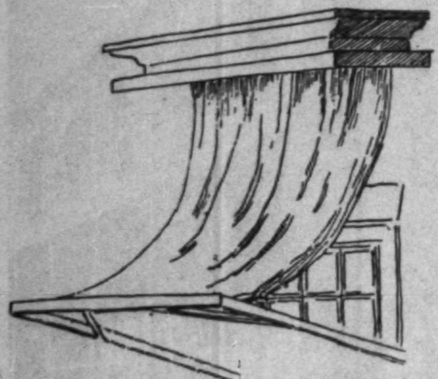
In paintings of the Italian masters of the fifteenth century we find a top-hinged awning-like blind which was held open by means of a wooden prop, 3, 4. This awning-blind was rigid and evidently consisted either of boards held together with cleats or of a wood frame covered with fabric. Such top-hinged shutters became common in England. According to C. F. Innocent (*The Development of English Building Construction*, Cambridge, 1916), glazed windows were rare in the British Isles until the middle of the seventeenth century and window openings were provided with top-hinged wooden shutters which were originally known as windows (wind-doors). When glazed sash came into general use, these boarded shutters were retained for reasons of security as well as sun control. In America they have remained in common use down to the present and may be seen on many a beach house, 4, and, unaccompanied by sash, on tenant farmers' huts in the south. One form, widely distributed in the West Indies, is louvred, 5, and this traditional type has been employed by modern architects, 6. Yet of wooden shutters the side-hung type, solid or louvred, was by far the most usual in eighteenth-century England and her colonies. At first the slats of the louvred shutter were always fixed. By George III's reign, however, the louvred shutter with movable slats operated by a rod to which each slat was attached had been invented. A shutter of this type is illustrated in vol. 9 of plates in Diderot's *Encyclopedie* (1771), 7.

The fabric sun-blind was widely used in England in the eighteenth century and



7

7, shutter with movable slats, from Diderot's Encyclopedie. *The page on which it occurs also shows the internal mechanism of an automatic blind (rolling shade in U.S.A.), 'a quite recent invention' in 1771 when the volume appeared.*



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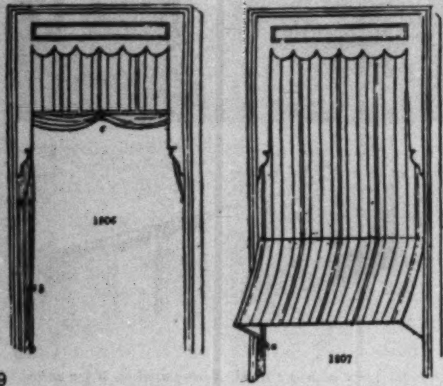


9

8, *drawings showing an awning and its frame, possibly similar to the 'Umbrellow frame' mentioned in the excerpt from the accounts of the College of William and Mary. The sketch is copied from an illustration in* The South Parade at Bath, *published by F. Molton in* 1784.
9, *the so-called 'bonnet blind,' drawn up and let down. These drawings, from J. C. Loudon's* An Encyclopaedia of Cottage, Farm and Villa Architecture *show what was 'considered the best description of cloth outside blind' in* 1853 *when the book was published.*

appears in many prints of the period. One form of sun-blind when drawn up fitted under an overhanging hood, 8. Even less conspicuous when not in use was the 'bonnet blind' illustrated in J. C. Loudon's *Encyclopædia of Cottage, Farm and Villa Architecture* (third edition, London, 1853), 9. It is worth note that the sun-blind was one of the several things to which the eighteenth century applied the term 'umbrello.' The *Oxford English Dictionary* gives three examples of this application, and recently, in studying the accounts of the College of William and Mary at Williamsburg, Virginia, the present writer came across the following entries for 1766–67:

[1766. Ms. torn.- - - - - -]ge. . . . Dr to
Jno Saunders . . .
To a new Umbrellow £
frame & making a
cloth for it - - - - - - - 12 [ms. torn]
To putting up Six
Umbrellows - - - - - - 2 -
[ms. torn] 6th . . .
[Ms. torn - - - -]g 1
Umbrellow frame &
puting [ms. torn]
- - - - - - . . .
8th To a new Roller for
an Umbw puting it
up - - - - - - - - - - - - 2 .6
Augt 5 . . .
To making new Cloths
for 2 Umbrellows &
puting them up - - - 6 .-

Strangely enough, these entries would seem to constitute the only direct evidence we have that fabric sun-blinds were used in colonial Virginia.

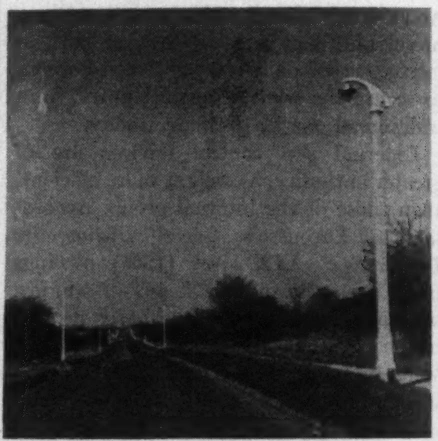
Howard Dearstyne

COUNTER-ATTACK

67. Stevenage New Town (*Development Corporation*). Gossip fences (or anti-gossip fences) six feet high are being erected at the request of tenants who want privacy. That is fine, except that they are being built around all the gardens. Why? Surely the answer is to build fences only where they are wanted and not to make a rule of what should be a convenience. The point is basic to designing every part of mass housing; people are different, and the greater the number of choices that the architect can build—not just 'houses' and 'flats' but dozens of types of each—the better the result will be, visually as well as socially. At the moment the New Towns really are dwellings for a statistical average man.

68. Bushey, Herts, and Banstead, Surrey (*Borough Surveyors*). The recent gallant fight by A. E. Matthews to prevent an ugly post, 1, being put outside his house at Bushey has revealed another skeleton in the municipal cupboard—apart from the permanent skeleton that the officials don't seem to care two hoots about the wishes of the people they are supposed to serve. The standard selected is not now on the COID list—though it was at the time of selection. These brand-new posts at Banstead, 3, going through open country purely for the sake of uniformity, incidentally—are examples of another bad design, also no longer on the COID list. How long is this going on? Any borough official who cared anything for his town would cancel the order if a standard was taken off the approved list—but then any borough official who cared for his town would never have picked on these designs in the first place.

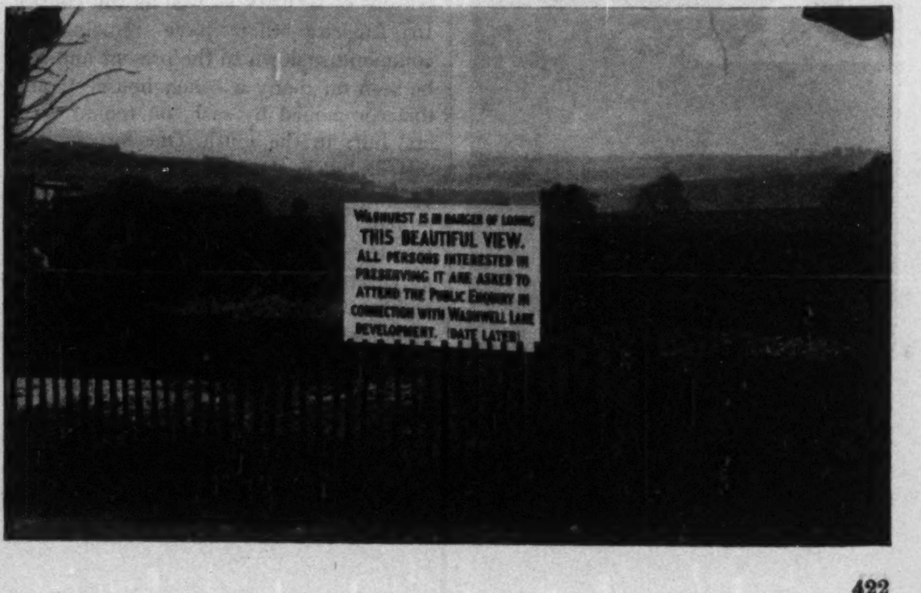
1



3

69. Ware, Herts (*Urban District Council*). Ware doesn't know how to look after itself. Since 1950 a set of gaps has appeared in the town to be filled only by inappropriate flower beds and bad borough engineer's furniture. The latest is a huge site at the east end of the main street, which is obviously to be built on a splay; the inevitable fussy accompaniment has appeared on the pavement, 4. Five years ago this view, 5, on a side road was a wall and cottages; now it is only a windy desert with a too-large public lavatory and a too-wide footpath. Any large-scale features that remain, such as grass, are gnawed at, rat-like, made petty and fussy, 6 and 7. The other side of the story is that the people (often old) in the cottages are rehoused farther away where they feel out of things, using up more of the countryside and multiplying the traffic problems.

70. Wadhurst, Sussex (*Local societies*). A self-explanatory good idea from Wadhurst, 2,


WADHURST IS IN DANGER OF LOSING
THIS BEAUTIFUL VIEW.
ALL PERSONS INTERESTED IN
PRESERVING IT ARE ASKED TO
ATTEND THE PUBLIC ENQUIRY IN
CONNECTION WITH WASHWELL LANE
DEVELOPMENT. (DATE LATER)

2

4

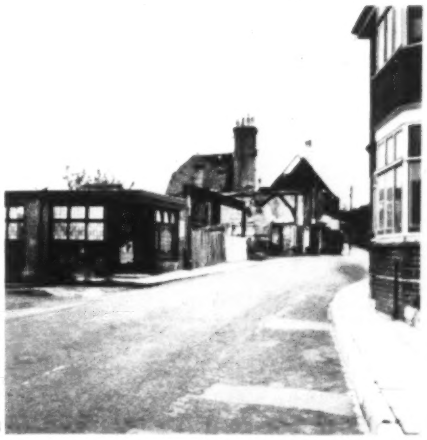
5

6

7

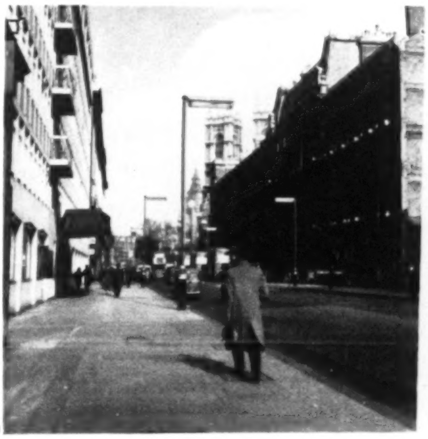
which ensures that everyone knows what is happening and makes them look at the view in question. Here the landowner made no objection to the notice board; in similar circumstances many of course would object, but there is no reason why a local authority should not allow such a sign on the roadside.

71. Wadhurst, Sussex. Also at Wadhurst is this gap in the village centre, 8, where a Meteor night fighter crashed into the main street a couple of years ago. Most of this land is owned by a brewery, and the site is a difficult and subtle problem in what re-creating the heart of the village effectively is; it is a problem deserving the attention of the best architects we have. Why not an open competition?



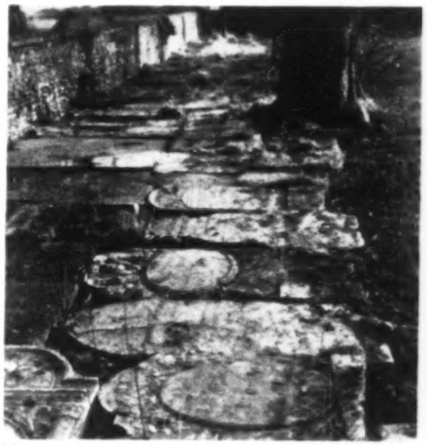
8

72. Westminster, London (*Borough Engineer and City Council*). Below, 9, is one of the views described by Gordon Cullen on page 405 as it actually appears from today's Victoria Street; lamps first and the Abbey a poor second. It is an amazing thing that Westminster of all boroughs should have chosen the heaviest available design with which to belabour its main roads: Lower Regent Street, Piccadilly, Shaftesbury Avenue and Knightsbridge have all been beaten up like this in the past year. The difference is clearest in Tottenham Court Road where Westminster's fluorescent troughs crash through up to the borough boundary to be followed by St. Pancras with sodium lights in a restrained adaptation of their old lights: the standard of illumination is identical. This is a very poor performance by what ought to be one of the most enlightened of boroughs a borough which as yet has no Civic Society; the least it can now do is to get a better model for the remaining main roads such as Whitehall; not an unhappy rehash of the old designs as used in Parliament Square but a genuinely up-to-date elegant thin standard: they do exist.



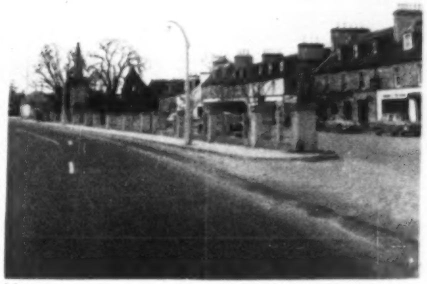
9

73. Sutton St. Edmund, Lincs (*Parish Council and Diocesan Advisory Committee*). The grubbing up of churchyards is one of the nastiest evidences of subtopian mentality, with the old pattern of gravestones smoothed away for 'convenience.' The churchyard at Sutton St. Edmund, north of Wisbech, now looks as though a tractor had got in by mistake, 10, which is all the sadder because it was originally full of first-rate local eighteenth-century headstones of a type sometimes found in the Fens at Gedney and March for example. These are now hugger-mugger at one end in a barbarous and brutal jamming together in which some have been cracked and all are exposed to maximum weather effects: not an improvement to be proud of.



10

74. Beauly, Invernesshire (*Burgh Council*). It is rare enough that one improvement would transform a whole town centre, but this is true at Beauly. At the moment the simple houses on either side and the unexpected Cistercian abbey at the end are quite overawed by the heavy-handed municipal mess in the middle, 11; remove it and the tiny demure centre would start to be a town square again. This bit of clumsiness appeared in Outrage and hasn't mellowed in three years; A9, which runs up one side of the square, could easily be demarcated by changes in the road surface. The smaller the burgh, the lighter the treatment it must have and this thumping great railing would outstare Union Street, Aberdeen.



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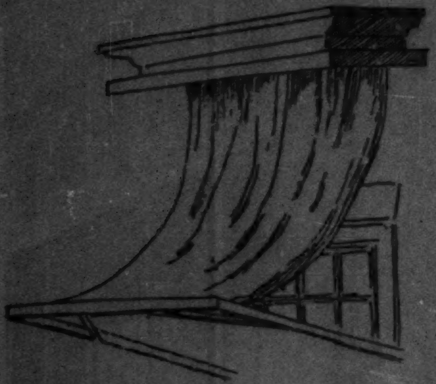

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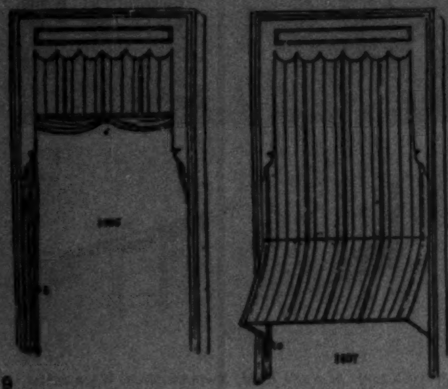


9

8, drawings showing an awning and its frame, possibly similar to the 'Umbrellow frame' mentioned in the excerpt from the accounts of the College of William and Mary. The sketch is copied from an illustration in The South Parade at Bath, *published by F. Molton in 1784.*

9, the so-called 'bonnet blind,' drawn up and let down. These drawings, from J. C. Loudon's An Encyclopaedia of Cottage, Farm and Villa Architecture *show what was 'considered the best description of cloth outside blind' in 1853 when the book was published.*

appears in many prints of the period. One form of sun-blind when drawn up fitted under an overhanging hood, 8. Even less conspicuous when not in use was the 'bonnet blind' illustrated in J. C. Loudon's *Encyclopædia of Cottage, Farm and Villa Architecture* (third edition, London, 1853), 9. It is worth note that the sun-blind was one of the several things to which the eighteenth century applied the term 'umbrello.' The *Oxford English Dictionary* gives three examples of this application, and recently, in studying the accounts of the College of William and Mary at Williamsburg, Virginia, the present writer came across the following entries for 1766–67:

> [1766. Ms. torn. - - - - - -]ge. . . . D*r* to
> Jn*o* Saunders . . .
> To a new Umbrellow frame & making a cloth for it - - - - - - £ - 12 [ms. torn]
> To putting up Six Umbrellows - - - - - - 2 -
> [ms. torn] 6th . . .
> [Ms. torn - - - -]g 1 Umbrellow frame & puting [ms. torn]
> - - - - - - . . .
> *8th* To a new Roller for an Umb*w* puting it up - - - - - - - - - - - - 2 .6
> Aug*t* 5 . . .
> To making new Cloths for 2 Umbrellows & puting them up - - - 6 .-

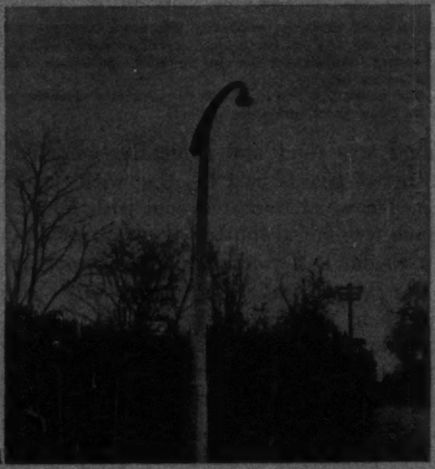
Strangely enough, these entries would seem to constitute the only direct evidence we have that fabric sun-blinds were used in colonial Virginia.

Howard Dearstyne

COUNTER-ATTACK

67. Stevenage New Town (*Development Corporation*). Gossip fences (or anti-gossip fences) six feet high are being erected at the request of tenants who want privacy. That is fine, except that they are being built around all the gardens. Why? Surely the answer is to build fences only where they are wanted and not to make a rule of what should be a convenience. The point is basic to designing every part of mass housing; people are different, and the greater the number of choices that the architect can build—not just 'houses' and 'flats' but dozens of types of each—the better the result will be, visually as well as socially. At the moment the New Towns really are dwellings for a statistical average man.

68. Bushey, Herts, and Banstead, Surrey (*Borough Surveyors*). The recent gallant fight by A. E. Matthews to prevent an ugly post, 1, being put outside his house at Bushey has revealed another skeleton in the municipal cupboard—apart from the permanent skeleton that the officials don't seem to care two hoots about the wishes of the people they are supposed to serve. The standard selected is not now on the COID list—though it was at the time of selection. These brand-new posts at Banstead, 3, going through open country purely for the sake of uniformity, incidentally—are examples of another bad design, also no longer on the COID list. How long is this going on? Any borough official who cared anything for his town would cancel the order if a standard was taken off the approved list—but then any borough official who cared for his town would never have picked on these designs in the first place.

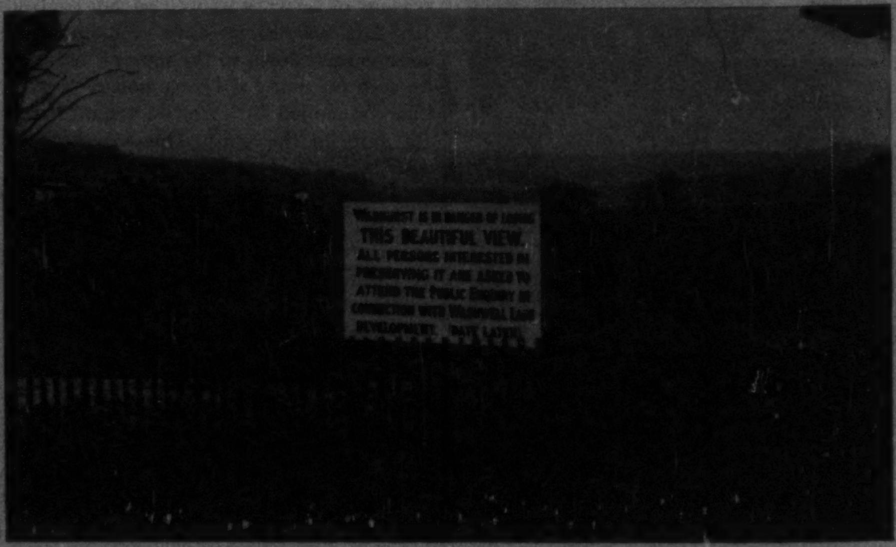


1

3

69. Ware, Herts (*Urban District Council*). Ware doesn't know how to look after itself. Since 1950 a set of gaps has appeared in the town to be filled only by inappropriate flower beds and bad borough engineer's furniture. The latest is a huge site at the east end of the main street, which is obviously to be built on a splay; the inevitable fussy accompaniment has appeared on the pavement, 4. Five years ago this view, 5, on a side road was a wall and cottages; now it is only a windy desert with a too-large public lavatory and a too-wide footpath. Any large-scale features that remain, such as grass, are gnawed at, rat-like, made petty and fussy, 6 and 7. The other side of the story is that the people (often old) in the cottages are rehoused farther away where they feel out of things, using up more of the countryside and multiplying the traffic problems.

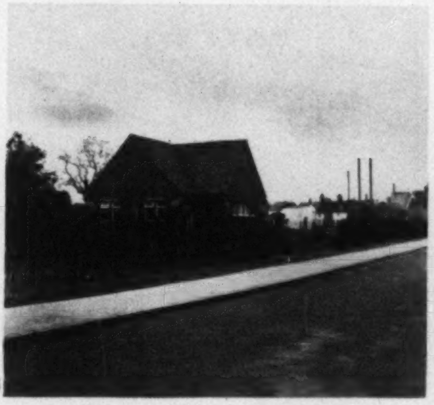
70. Wadhurst, Sussex (*Local societies*). A self-explanatory good idea from Wadhurst, 2,



2

WADHURST IS IN DANGER OF LOSING
THIS BEAUTIFUL VIEW.
ALL PERSONS INTERESTED IN
PRESERVING IT ARE ASKED TO
ATTEND THE PUBLIC ENQUIRY IN
CONNECTION WITH WADHURST LAND
DEVELOPMENT. DATE LATER

4



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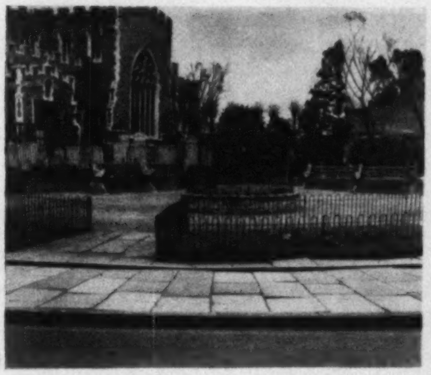
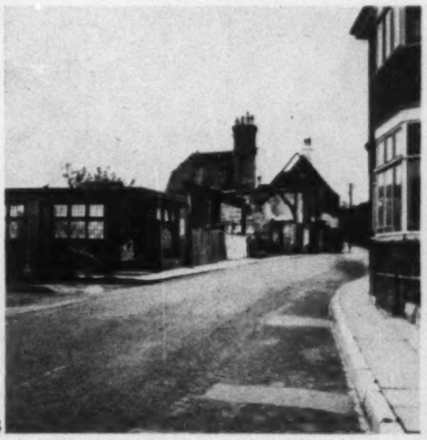


6

7

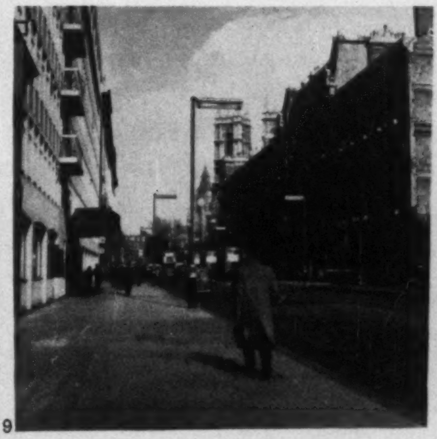
which ensures that everyone knows what is happening and makes them look at the view in question. Here the landowner made no objection to the notice board; in similar circumstances many of course would object, but there is no reason why a local authority should not allow such a sign on the roadside.

71. Wadhurst, Sussex. Also at Wadhurst is this gap in the village centre, 8, where a Meteor night fighter crashed into the main street a couple of years ago. Most of this land is owned by a brewery, and the site is a difficult and subtle problem in what re-creating the heart of the village effectively is; it is a problem deserving the attention of the best architects we have. Why not an open competition?



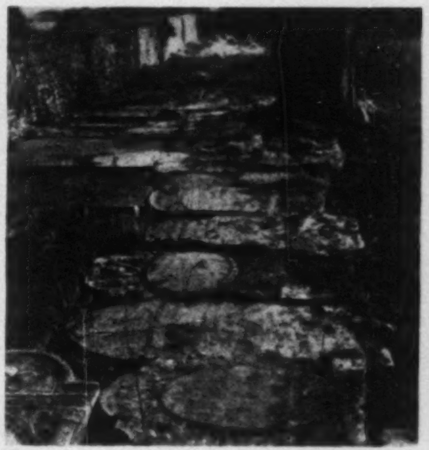
8

72. Westminster, London (*Borough Engineer and City Council*). Below, 9, is one of the views described by Gordon Cullen on page 405 as it actually appears from today's Victoria Street; lamps first and the Abbey a poor second. It is an amazing thing that Westminster of all boroughs should have chosen the heaviest available design with which to belabour its main roads: Lower Regent Street, Piccadilly, Shaftesbury Avenue and Knightsbridge have all been beaten up like this in the past year. The difference is clearest in Tottenham Court Road where Westminster's fluorescent troughs crash through up to the borough boundary to be followed by St. Pancras with sodium lights in a restrained adaptation of their old lights: the standard of illumination is identical. This is a very poor performance by what ought to be one of the most enlightened of boroughs—a borough which as yet has no Civic Society; the least it can now do is to get a better model for the remaining main roads such as Whitehall; not an unhappy rehash of the old designs as used in Parliament Square but a genuinely up-to-date elegant thin standard: they do exist.



9

73. Sutton St. Edmund, Lincs (*Parish Council and Diocesan Advisory Committee*). The grubbing up of churchyards is one of the nastiest evidences of subtopian mentality, with the old pattern of gravestones smoothed away for 'convenience.' The churchyard at Sutton St. Edmund, north of Wisbech, now looks as though a tractor had got in by mistake, 10, which is all the sadder because it was originally full of first-rate local eighteenth-century headstones of a type sometimes found in the Fens—at Gedney and March for example. These are now hugger-mugger at one end in a barbarous and brutal jamming together in which some have been cracked and all are exposed to maximum weather effects: not an improvement to be proud of.



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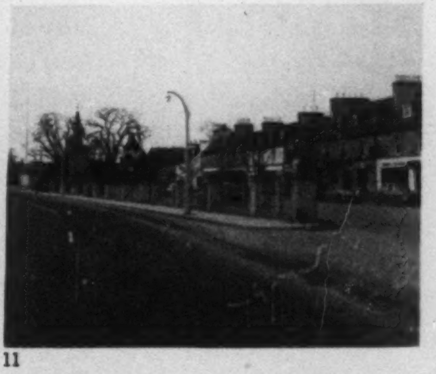
74. Beauly, Invernesshire (*Burgh Council*). It is rare enough that one improvement would transform a whole town centre, but this is true at Beauly. At the moment the simple houses on either side and the unexpected Cistercian abbey at the end are quite overawed by the heavy-handed municipal mess in the middle, 11; remove it and the tiny demure centre would start to be a town square again. This bit of clumsiness appeared in Outrage and hasn't mellowed in three years; A9, which runs up one side of the square, could easily be demarcated by changes in the road surface. The smaller the burgh, the lighter the treatment it must have—and this thumping great railing would outstare Union Street, Aberdeen.



11

SKILL

GEOMETRY OF SHADE

by Michael Brawne

One of the more important aspects of recent architectural thought is the realization that a great many facets of design can be determined by methods of calculation. This has, of course, been commonplace for over a century as far as structure is concerned, but is relatively new in the various forms of environmental control. Light, temperature, humidity, air movement and sound are all amenable to this method. Knowledge of solar control is evidently of great importance in dealing with the first two of these conditions. What has, however, prevented the general application of such knowledge has been the lack of a simple design tool which would make the calculation of shade straightforward enough to be used in the day to day work of the practising architect. The solar charts developed by the Olgyay brothers and discussed in this article would seem to have overcome this shortcoming. These were first described in 1953 *and have now been fully published in* 'Solar Control and Shading Devices', *Olgyay and Olgyay* (*Princeton University Press; London: Oxford University Press* £5.0.0.). *Howard Dearstyne writes on sun control in Miscellany on pages* 420–422.

Facts about the relation of the building and its openings to the sun are important in all climates. Where there is little sun, overhangs, glare control devices, trees, neighbouring buildings, need all to be placed so that they do not obstruct the sun. It is probably significant that a great deal of research on insolation and shade calculation has in fact been done by Pleijel in Sweden. Where, on the other hand, there is a great deal of sun, shade devices must be accurately constructed so that they obscure the sun completely during the period that its heat is excessive. Three facts need, therefore, to be determined:

1. The position of the sun throughout the day at all times of the year.
2. The amount of shade given by an obstruction at any particular time.
3. The amount of direct and diffuse radiation present at any time due to the sun.

The three charts described later deal with these situations. Used together they answer any of the problems of solar control likely to be encountered.

Several methods of shade calculation have been developed in the past. A few are described for example in Fry and Drew's book on 'Tropical Architecture in the Humid Zone' and several more are shown in Aronin's 'Climate and Architecture.' These calculations fall into two groups: those which demand the making of a model and its testing below an artificial light which simulates the sun, and various two-dimensional devices like protractors and charts. Few offices have the time to make and test models, especially as shading devices have first to be guessed and then tested under certain critical sun angles. Two-dimensional design tools like charts or protractors would, therefore, seem to be the only feasible method. Their

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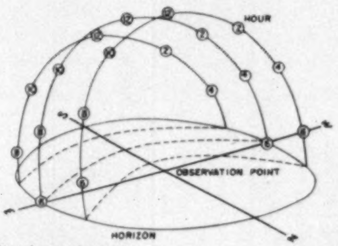
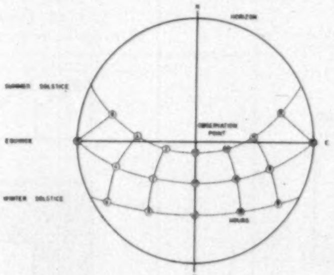
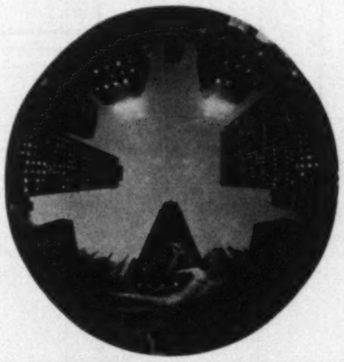


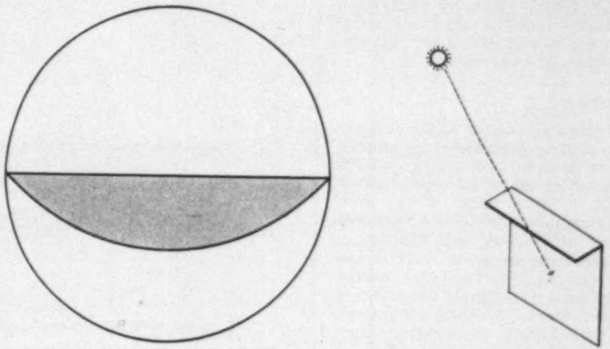
1, *the imaginary sky-vault.*



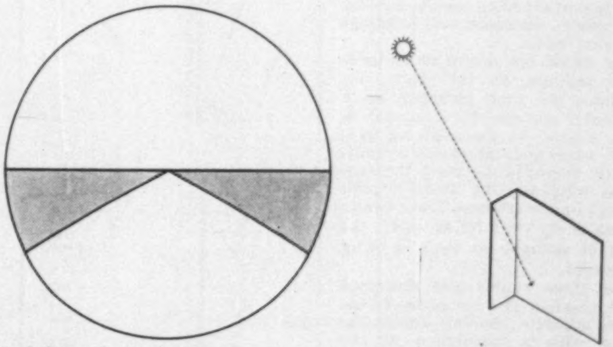
2, *the sunpath diagram, the projection of* 1.



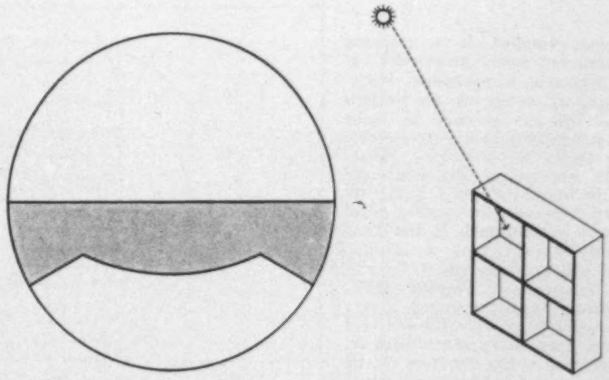
3, *Rockefeller Plaza photographed with equidistant lens system.*



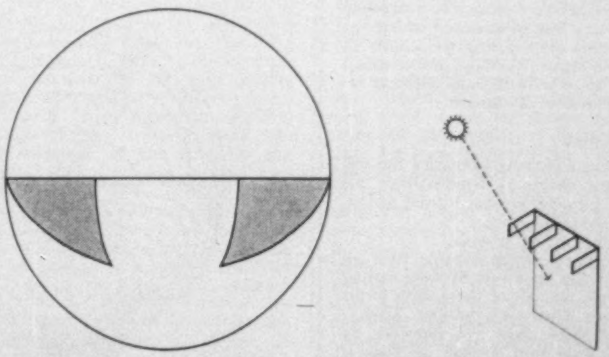
4, *shading mask of horizontal projections parallel to the wall.*



5, *shading mask of vertical fins.*



6, *shading mask of egg-crate devices.*



7, *shading mask of horizontal projections at right angles to the wall.*

continued from page 424]

use poses the problem of reducing a three-dimensional sphere, the sunpath, to a two-dimensional obstruction. It is a problem similar to that of drawing a map. If the same projection, in the cartographic sense, is used for the shading masks produced by the various obstructions as well as the radiation data, the three charts will be comparable and may be used together.

Sunpath

The Olgyay charts use the equidistant projection in which the altitude angles of the sun appear equally spaced on the diagram, 1. This projection gives the most legible charts, 2.

The circumference of the circle represents the horizon, the centre the position of the observer.

Shading Mask

If obstructions are now plotted to the same projection, various shapes will have the following characteristics:

1. Horizontal overhangs parallel to the wall become segmental lines, 4.
2. Vertical fins at right angles to the wall become radial lines, 5.
3. Eggcrate devices become a combinations of 1 and 2, 6.
4. Horizontal projections at right angles to the wall become segmental lines at right angles to those given by overhangs, 7.

These characteristic distortions of the equidistant projection are clearly demonstrated by the photograph of Rockefeller Centre, 3, taken with a camera having an equidistant lens system. In each of these charts the position of the line is dependent on the angle the extreme edge of the device subtends to the opening to be shaded. Thus the chart does not dictate the form which the shading device is to take, it merely determines its relation. A few examples may help to make this clear. An opening requires an overhang with the following shading mask, 8, i.e. the edge of the overhang should be at an angle of 70° to the base of the opening. This shading mask can be achieved by a solid projection, 9 (a), by a louvred overhang (b), by tilted louvres (c), by louvres hung in front of the opening (d), by a series of horizontal fins (e), by an external venetian blind (f), or any other configuration satisfying the critical condition. The choice of the shape is purely the architect's responsibility and these charts in no way restrict architectural expression.

The characteristic outlines of horizontal and vertical projections are, for simplicity, combined in a single chart, 10. The lower half shows the segmental lines given by horizontal projections parallel and at right angles to the wall, the upper half the radial lines of vertical fins.

Radiation

Empirical data exist on the amount of direct and diffuse radiation present on a vertical surface due to sunlight falling on it out of an unobstructed sky at a given angle. These data have been tabulated by the American Society of Heating and Ventilating Engineers and are given in BThU per hour per sq. ft. They are purely dependent on the angle of incidence and the chart, 11, again plotted on the equidistant projection, may therefore be used for any latitude.

The figures represent radiant energy only and have, of course, nothing to do with the air temperature which may exist at the place being investigated. They are particularly important when calculations for heat gain in airconditioned buildings are being made.

The radial line drawn at an arbitrary position on the chart, 11, tabulates the total radiation on a horizontal surface. This amount is again related to the angle of incidence, being greatest when the sun is directly overhead, i.e when the sunbeams have the the shortest path through the atmosphere. These values are naturally of interest when the effect of sunlight on roofs is being considered.

The three charts just described make possible the complete design of an accurate shading device together with a calculation of the amount of heat energy excluded. Before, however, the limits of a shading device are to be established it is important to know at what times of the year shade is in fact needed.

Human comfort is a complex condition not easily measurable. If three elements, temperature, humidity and air movement, are isolated it does become possible to make some generalizations about tolerable upper limits for sedentary lightly clothed workers in the temperate zone. Before these upper limits are reached, however, the cooling effect of shade is welcomed. It has been generally agreed that a shading device will prove useful if the dry bulb temperature reaches 70°F. Occasionally, as in the tropics, it may be desirable to provide 100 per cent shading, irrespective of temperature, so that none of the structure should have a chance to absorb heat which it would re-radiate later. In other parts of the tropics it may, on the other hand, be preferable to delay shading in the early morning so as to give the sun a chance to evaporate the heavy film of moisture which has been deposited during the night. In every instance, shading, like so many other aspects of design, depends on an awareness of climate.

Examples

In the following examples the use of these charts is demonstrated for three characteristic localities; London, Phoenix and Lagos.

London. Lat. 52° approx.

The temperature exceeds 70°F on an average on about 45 days during the year and all of these days occur between April and October. Thirty-six of these days are, however, in June, July and August so that if shading is to be considered it may well be expedient to confine it to these three months. Temperatures above

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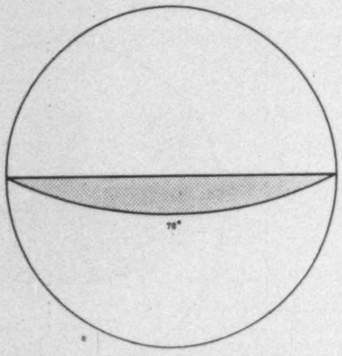
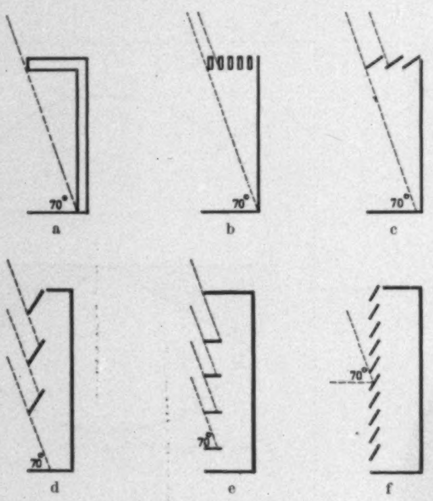
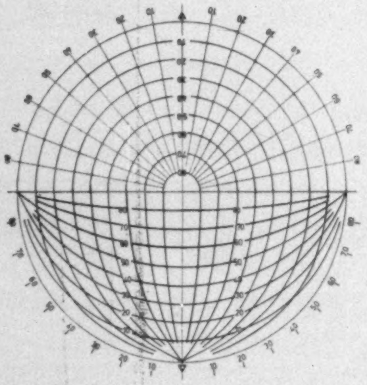


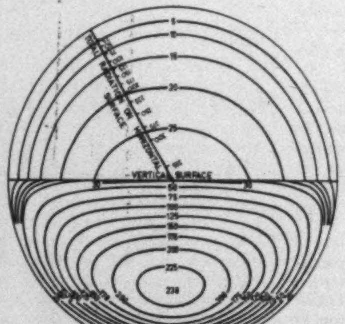
8, *shading mask for horizontal projection at 70°*



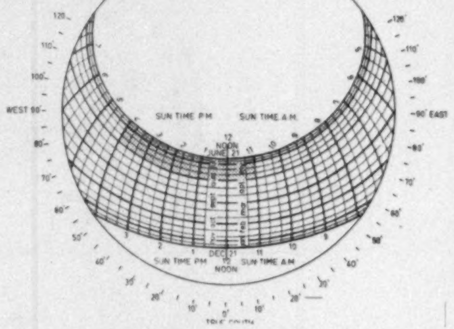
9, *various devices which give a shading mask as 8.*



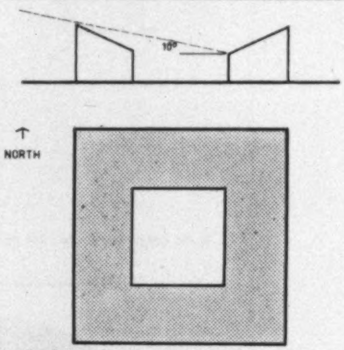
10, *shading chart.*



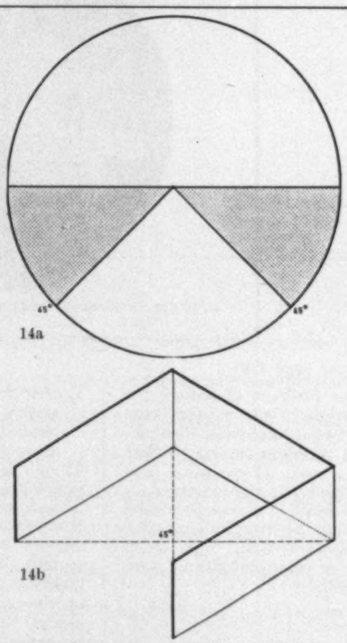
11, *radiation chart, total radiation in BTU/hour/sq. ft.*



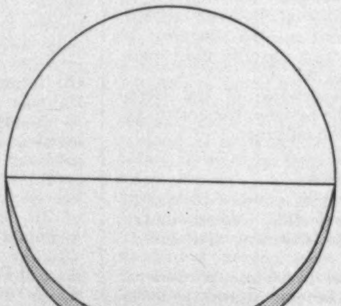
12, *sunpath diagram for London.*



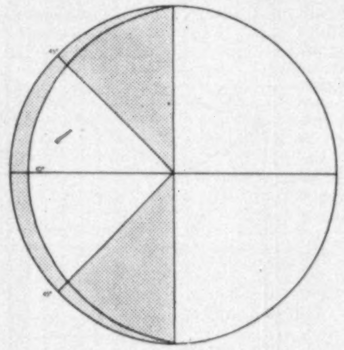
13, *plan and section of courtyard.*



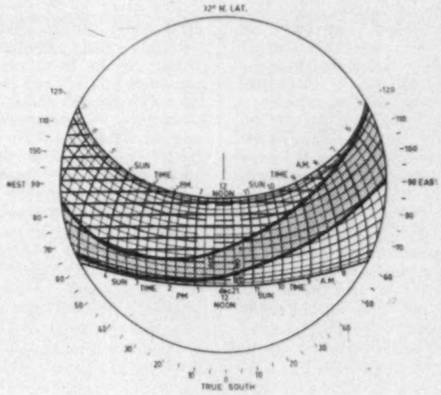
14, *shading mask (a) for the two side walls (b).*



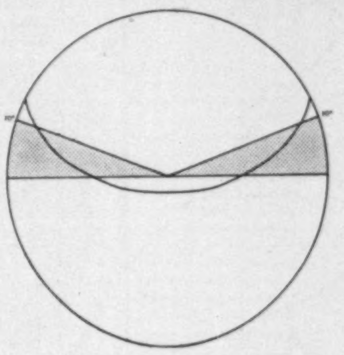
15, *shading mask due to the ridge.*



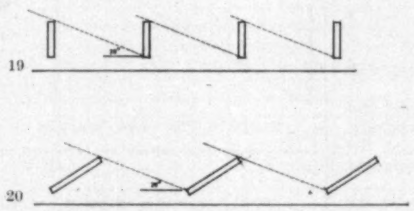
16, *combined shading mask of 14 and 15.*



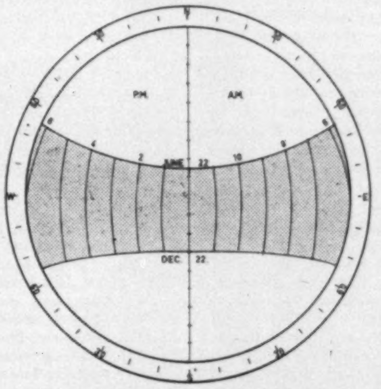
17, *sunpath diagram for Phoenix, Arizona.*



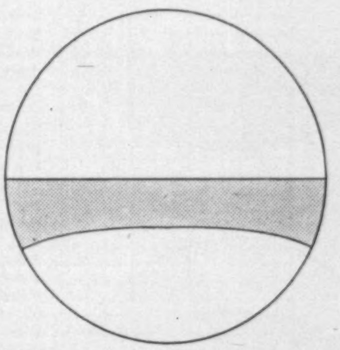
18, *sunpath and possible mask for a north wall.*



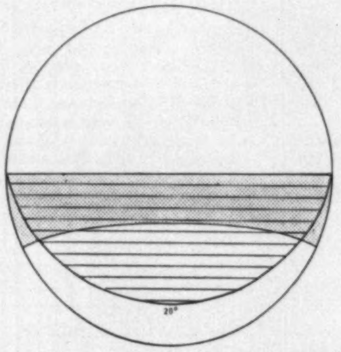
19 *and* 20, *vertical fins giving mask as* 18.



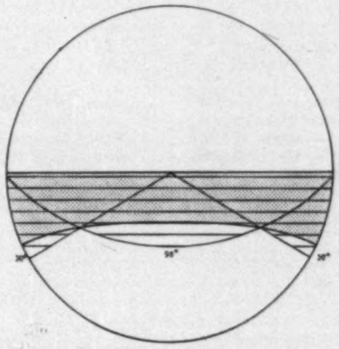
21, *sunpath diagram for Lagos, Nigeria.*



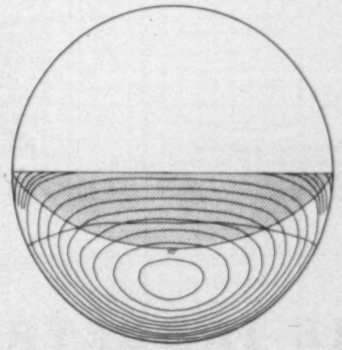
22, *sunpath for south wall.*



23, *possible shading mask for 22.*



24, *alternate shading mask for 22.*



25, *partial shading mask and radiation diagram.*

continued from page 426]

70°F are also most likely to occur between 11 a.m. and 4 p.m. so that the sunpath diagram for London showing the possible overheated period would take the form outlined in 12. Whether or not shading devices would be worthwhile for such a short period of the year does, to a great extent, depend on the occupancy of the building. The case is somewhat analogous to that recently described by Markus for thermal insulation. It would seem, for example, extremely questionable whether shading would be needed in a school which is unlikely to be in use during a large part of this critical period. It may on the other hand be extremely worthwhile in south facing restaurants with a large occupancy during the middle of the day.

Unfortunately any fixed shading device which excludes the sun during June, July and August will also do so in April and May, since the path of the sun is symmetrical about June 21. These earlier months are, however, quite cool, having between them only about four days on which the temperature rises above 70°F. It would seem important, therefore, that shading devices in this country should be adjustable if desirable sunshine is not to be excluded.

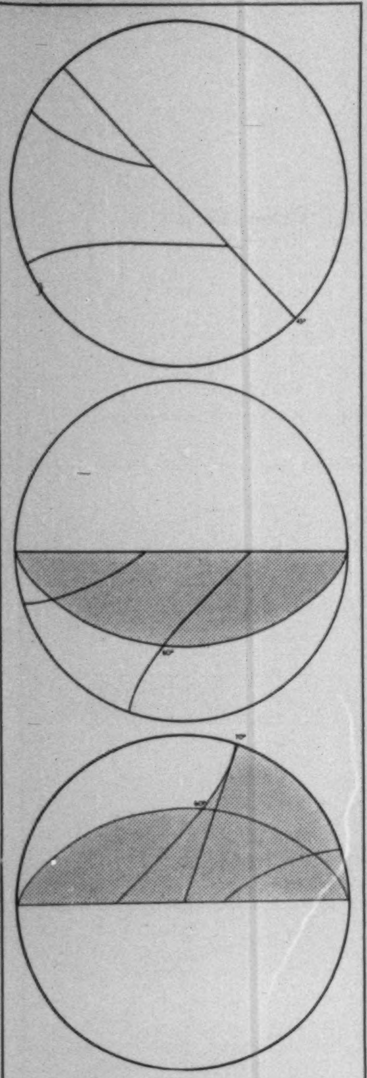
In fact the design check which most often needs to be done in this country is the reverse one, namely to ensure that obstructions do not exclude the sun from spaces in which it may be wanted. An example may show how the charts help in such check.

A courtyard 20 ft. by 20 ft. has the whole of the west wall in glass up to an 8-ft. ceiling. The roof is a one-way pitch and the ridge subtends an angle of 10° to the top of the glass opening, 13. It will be seen that the north and south walls are equivalent to two fins subtending an angle of 45° to the opening, 14 (a), which have a shading mask, (b). The ridge is equivalent to a horizontal obstruction parallel to the wall which, unlike an overhang above the opening, will have segmental shading masks moving inwards from the circumference of the chart as the angle becomes larger. In this case the mask will be as in 15. If these two masks are now combined on a piece of tracing paper and this sheet put over the London sun chart at the correct orientation the amount of sunlight penetrating the opening can be immediately discovered, 16. It will be seen that in December the sun will not reach the opening at all, in November, and January a very small amount will hit it for a few minutes about 3 p.m. and that this time will gradually increase until it is 2½ hours in September and March and five hours, from 2 p.m. to 7 p.m., at mid-summer.

Phoenix, Arizona. Lat. 32°

The desert climate of Phoenix has a considerable overheated period, the temperature being continuously over 70°F from the beginning of June to the middle of September and for large parts of the day in March, April, May, October and November. The sunpath diagram with the actual overheated period superimposed takes the form shown in 17. As in the case of London, shade is needed rather more in the second half of the year. The dark dotted area on the chart shows the dates on each side of June 21 on which shading is needed, the light area those in the latter half of the year only.

Evening temperatures in the sum-



26, *(a) sunpath for south-west wall.*
(b) shading mask of horizontal overhang.
(c) shading mask of (b) and vertical fin.

mer are over 90°F and persist in the eighties up to midnight. The late afternoon sun must, therefore, be obstructed. This is especially true of north walls which are liable to have large openings as this is otherwise the most advantageous orientation.

A north wall will have an outline giving the overheated period as in 18. If a piece of tracing paper is put over this it can be seen that this area will be obscured by two radial lines at an angle of 20° to the opening. Regular spaced fins as in 19 will provide adequate shading to a glass wall. Their size and distance apart is purely a matter of ratio. These fins will, of course, also cut out the early morning sun during the first part of the year when temperatures have in fact not yet reached 70°F. This could be overcome by tilting the fins so that they obscure the west sun, but let in the east sun, 20.

Lagos, Nigeria. Lat. 7°

In the tropical climate of the West Coast of Africa shading will be needed throughout the year. Even in the coolest month the average daily minimum temperature is 73°F, the average daily maximum is 82°F, so that the entire sunpath diagram, 21, is equivalent to the overheated period and needs to be obscured by the shading mask.

Upper and lower limits of comfort vary of course to some extent between inhabitants of the temperate zone and those of the tropics. The West Africa Building Research Station, conducting experiments in Accra, recently showed that a selected group of Africans found 75°F dry bulb the lower limit of comfort, 80°F the optimum and 85°F the upper limit. Fully acclimatized Europeans may also react in very much the same way.

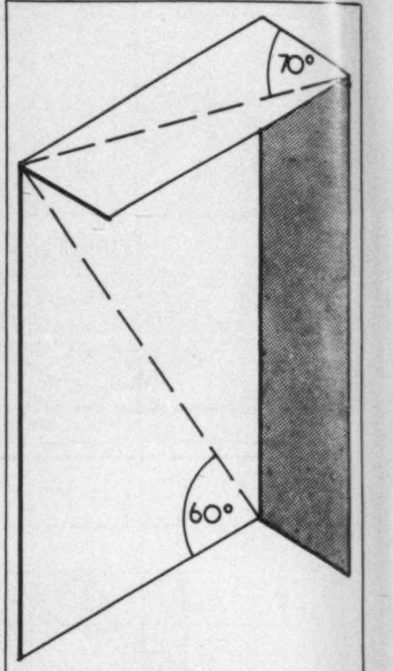
If a south wall is considered it will have a sunpath of the shape shown in 22, which needs to be obstructed. This outline is best drawn on a piece of tracing paper which can be put over the shading mask diagram, 10. A number of possible shading methods can now be devised.

An overhang at an angle of 20° will obscure most of the sunpath diagram, 23, except for very small areas in the early morning and late afternoon. This shape is obviously uneconomic as it provides a great deal more shade than is actually needed. An alternative solution might be to have an overhang at an angle of 50° and vertical fins at an angle of 30° which together give a shading mask which in this case totally obscures the sunpath, 24. There is again a duplication of shading. If the building is air-conditioned it may be important to check whether it would be cheaper to omit the vertical fins for example and impose an additional load on the plant. If a combined diagram of the sunpath and shading mask for an overhang of 50° are superimposed on the radiation chart, 25, an opening will in the worst month, December, receive about 225 BThU for every square foot of opening in the morning and the same amount in the evening. This total additional load of 550 BThU per day for every square foot of opening has to be equated in cost against the price of vertical fins.

It may be worthwhile as a summary of the discussion to take a further example and work out a shading device step by step.

An opening in a south-west wall in Lagos requires shading.

1. Take a piece of tracing paper and put it over the sunpath diagram.
2. Draw the wall as a line at the correct orientation through the centre of the circle.
3. Outline the area of the sunpath between this line and the circumference, 26 (a).
4. Superimpose this outline on to the shading mask diagram with the wall horizontally through the centre.
5. An overhang at an angle of 60° will obscure part of the sunpath, 26 (b). The opening is still unshaded in the late afternoon.
6. Swivel the tracing paper through 180° so that it lies over the radial lines.
7. A fin at an angle of 70° will obscure the remainder of the sunpath, 26 (c).
8. Three-dimensionally this takes the form of an egg-crate, 26 (d). The dimensions of the egg-crate are, of course, not determined. It could be a series of balconies with floor height fins or a screen composed of louvres no larger than those used in luminous ceilings.



26, *(d) three dimensional form of* 26 *(c).*

The method described is by far the simplest and most thorough so far developed. After a few examples have been worked out, it is only a matter of minutes before an accurate shading device can be designed. Sun and shade play an important role in human comfort and any method which shows the relation between these and architecture is therefore of considerable importance if the design attitude which Neutra among many others has for so long advocated —planning with a full awareness of the biological implications—is to be translated into architecture.

THE INDUSTRY

Curtain Walling Handbook

As Michael Brawne and Alan Craig pointed out in their article on curtain walling ('Walls off the Peg,' AR, September, 1957), the great advantage of the Holoplast curtain wall is that it can be erected from assemblies rather than components. A possible limitation is that it has been conceived primarily as a framework to hold phenolic panels. It is therefore encouraging to note that in Holoplast's most recent brochure ('Holoplast Curtain Walling') the framework is clearly regarded as having a life of its own, independent of the panels, and that details have been developed specifically to incorporate glass facings in front of phenolic panels and horizontally pivoted hardwood windows. The light alloy window range has also been enriched by the introduction of a horizontal sliding window and of a vertical sash. This is all to the good, for clearly the more words are put into the Holoplast architectural phrasebook the greater will be the variety of occasions on which the language can be used.

Holoplast Ltd., 116 *Victoria Street, London, S.W.*1.

The Marley Pantechnicon

It is a long time now since the Marley Group first claimed the attention of architects with their concrete tiles; and though architects have been aware that they have persistently added product after product to their range, most would be surprised to learn how wide this range now is. This is now easy to find out since the Marley Group have at last issued a comprehensive catalogue with the title 'Marley Products 1958.' This is a useful office reference, not only because of the many interesting products it contains, but because of the businesslike information it gives on how they should be used (and in some cases how specified). Marley have always been great people for easing, speeding up and cheapening traditional building; and it is probably fair to say that each of its divisions has this end chiefly in view. Even if the architect may decide in the end that he does not wish to use the 'rationalized traditional' solution to a problem, it is always of value to him to know what this solution is, even if it is only to obtain a yardstick of basic cost.

There are too many interesting subjects in this catalogue to mention each. Among those which your reviewer found particularly worthy of note were the trough valley tile, which seems to offer a much more satisfactory way of forming a valley in tiles than the ordinary method; the woodwool insulating set for insulating cisterns to BS417, the Marleyrail vinyl handrail (which has already been commented on in these columns) and the Marley No. 6 Underlayment for laying under floor tiles instead of a cement screed.

This last is a masterly innovation which cuts both the necessary thickness between tile and floor and the drying out time. In the section dealing with the works of Marley Concrete Ltd. there were three products which could come in very useful: the concrete clamp silo, the portable retaining wall sections and the concrete cesspool.

The more ambitious products of this division are less successful. The concrete garages, roof trusses and cycle sheds, whatever their practical virtues, are badly out of scale and ungainly in detailing. How splendid it would be if the production skill which they evidence could be allied to an equal sensibility in design. Let us hope that now all products are lined up in a comprehensive catalogue, the few uglies will be replaced.

The Marley Group, Sevenoaks, Kent.

Development in Precasting

The industrialization of building has taken two main lines of development: the first is the evolution of a

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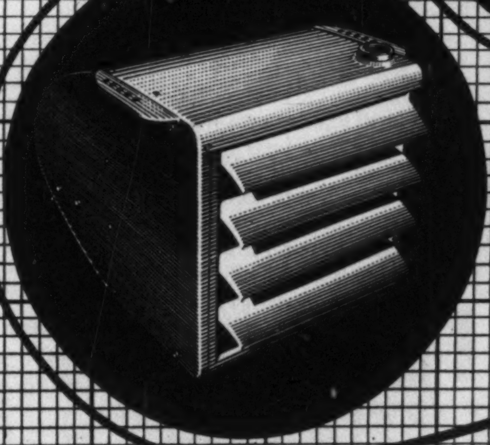

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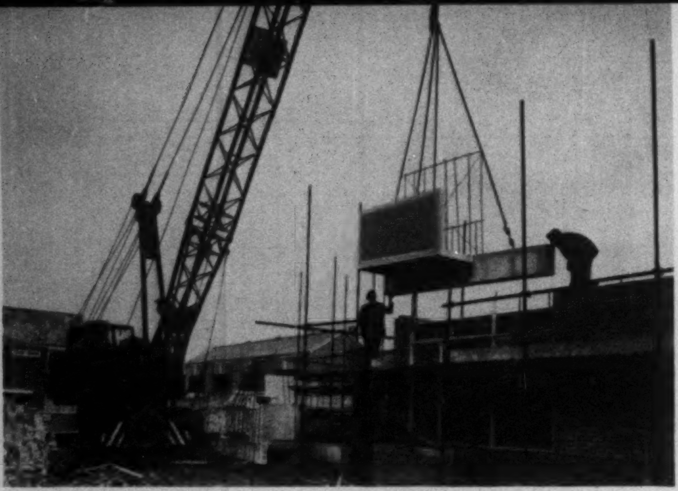
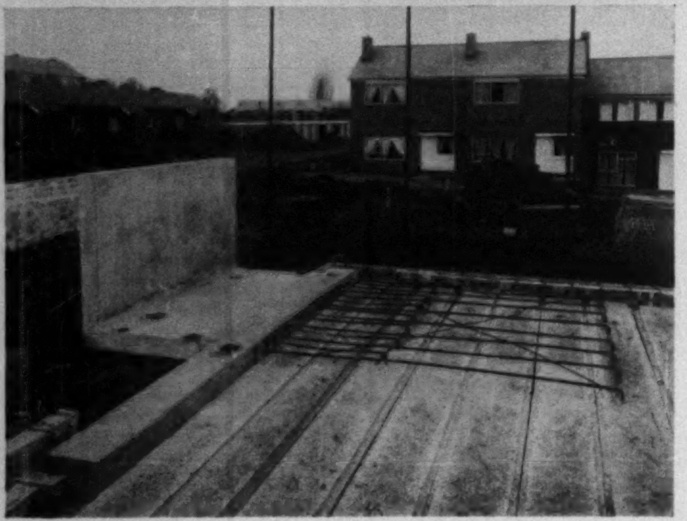




1, 2, *precast balcony slab, front and lintel.*

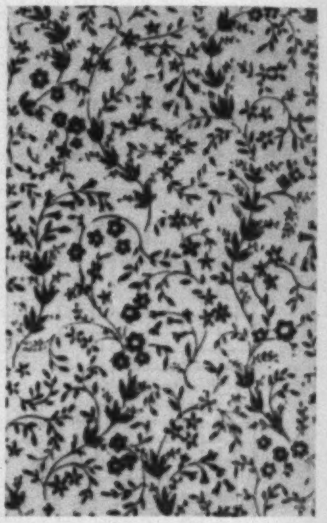
continued from page 428]

lightweight architecture built of factory-made components which can mostly be manhandled on site; the second is the development of more formidable handling equipment which enables traditional heavy construction to be factory made and brought on to the site in large components. A good example of this last is the balcony slab, front and lintel, illustrated in the photographs on the left. This is one of a series which have been made for three-storey flats at Basildon by Concrete Ltd., the architects being Basil Spence and Partners. The unit comes on to the site with the reinforcement bars which are to anchor it to the slab bent upwards for ease of transport. When the unit is in position these are then bent down till they lie parallel with the precast concrete plank floor. A screed is then laid over the planks, thus both tying in the balcony and converting the floor into a composite part precast, part *in situ* construction of the type we associate particularly with this firm. The advantage of this way of proceeding will be readily appreciated by architects; not only is it very expeditious, but it ensures that two very nasty joints are made under really adequate supervision. The front panel of the balcony is bush hammered.

Concrete Ltd., 16 Northumberland Avenue, London, W.C.2.

A New Delicacy in Melamine

Among the makers of patterned materials for buildings, few are as attentive to architects' requests as Bakelite Ltd. We have already commented in this column on their 'architectural patterns' (July, 1957) prepared for Warerite melamine sheet. Since the Building Exhibition the Warerite range has been further extended to include a new set of smaller scale patterns, two of which we illustrate to full size below. This exploitation of the small scale pattern in melamine sheet is a sensible development. In the first place it differentiates the material finally and decisively from wall paper, for patterns with this degree of fineness could not be reproduced in wallpaper; second the fineness of the pattern seems appropriate to the fineness, hardness and smoothness of melamine sheet. *Some* patterning is evidently necessary, for otherwise slight irregularities of plane tend to be noticeable; but a delicate repetitive pattern which reads rather as a texture seems more likely to achieve the ends of good modern



3, *new Warerite design, to full scale.*

continued on page 432

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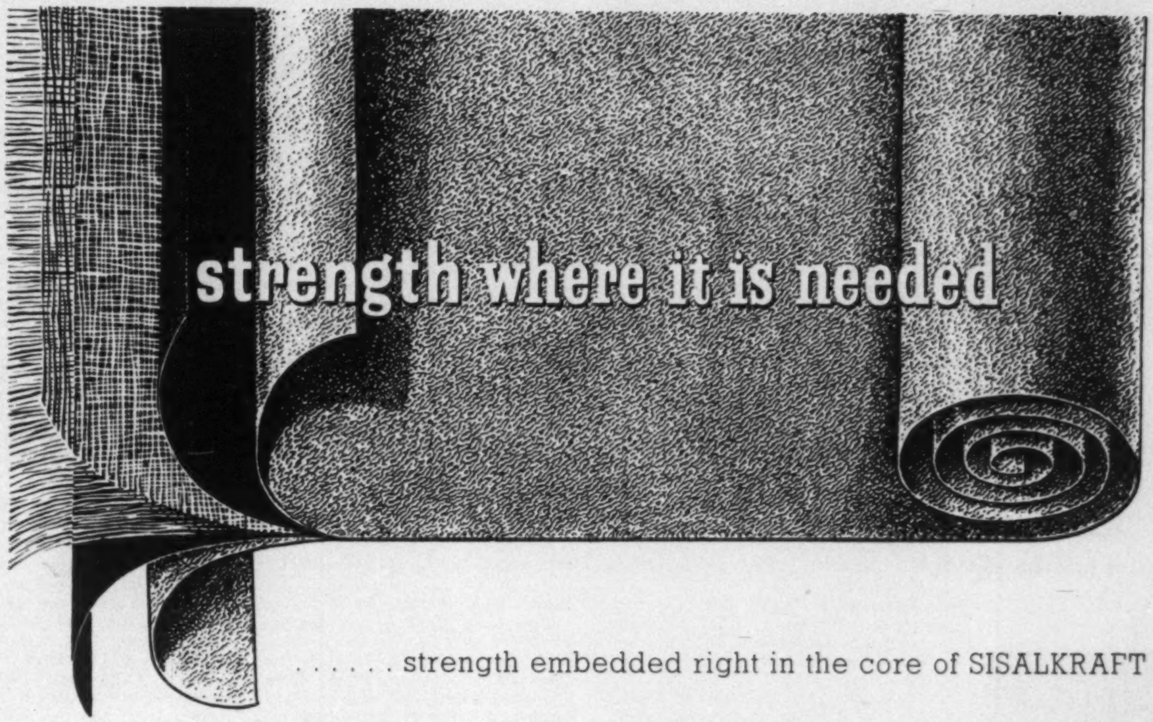
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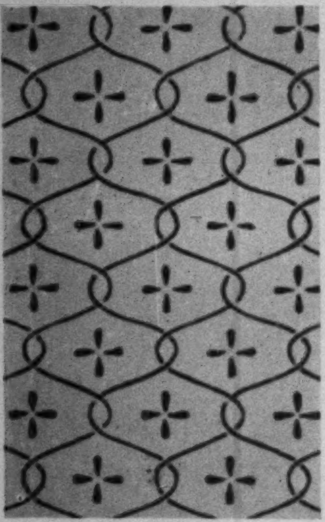

4, *another full size Warerite design.*

architectural detailing than a larger and more insistent pattern. These new additions should have a long and useful life.

Bakelite Ltd, 12–18 *Grosvenor Gardens, London, S.W.*1.

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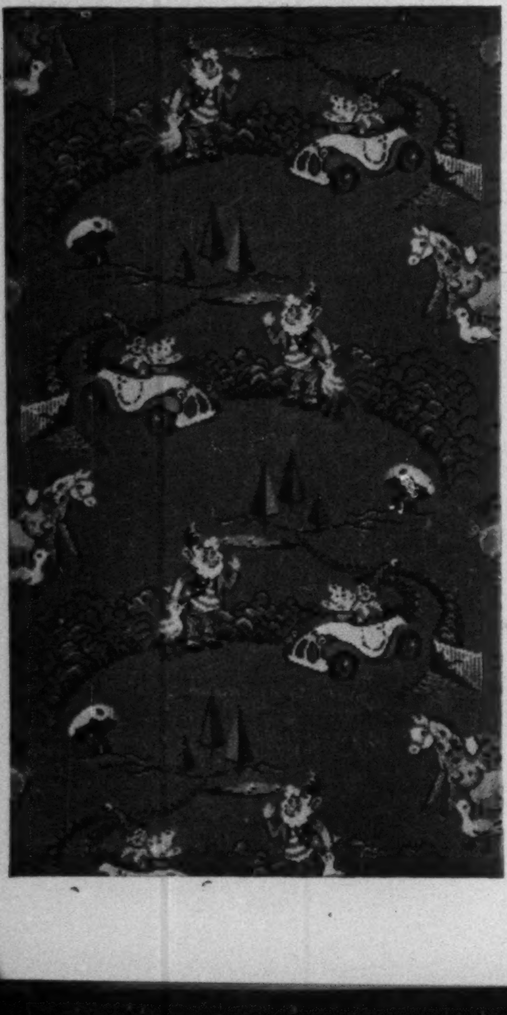

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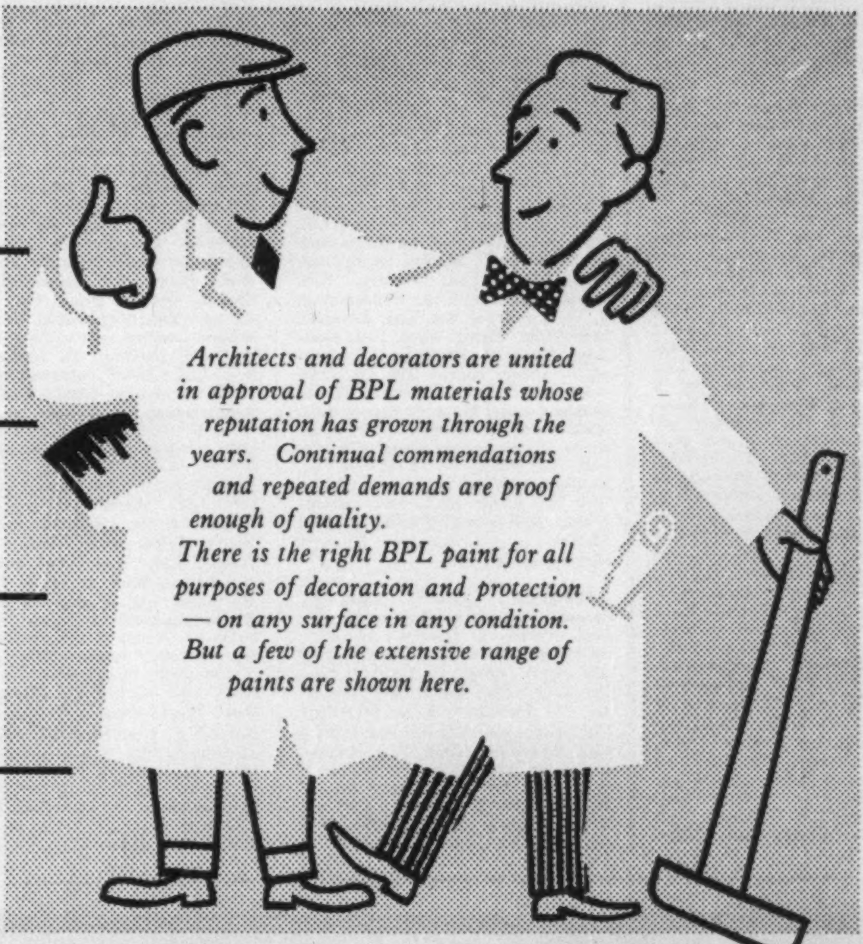

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Harlow—Market House, The Rowe, Stone Cross Hall and Market Cafe, Stone Cross. *Architect:* Frederick Gibberd. *General contractor:* W. & C. French Ltd. *Sub-contractors: Structural steelwork:* Banister Walton & Co. *Reinforced concrete and artificial stonework:* Helical Bar & Engineering Co. *Heating, hot water and ventilation systems:* W. Richardson & Co. *Metal windows:* Williams & Williams Ltd.; Aygee Ltd. *Decorative flooring:* Purbeck Decorative Tile Co. *Mosaic work:* Brockwell Mosaic Co. *Terrazzo flooring:* Alan Milne Ltd. *Sanitary fittings:* John Bolding & Sons. *Electrical installations:* Rashleigh Phipps & Co. *Passenger lift:* Marryatt & Scott. *Wall and floor tiling:* Parkinsons Ltd. *PVA flooring:* Prodorite Ltd. *Asphalt tanking and roofing:* Permanite Ltd. *Balustrading:* Clark-Hunt & Co. *Metal escape stairs:* Haywards Ltd. *Glazing:* F. Bowman (Glassworks) Ltd. *Insulated and decorative glazing:* Plyglass Ltd. *Paint and decorating:* Jenners Bros. *Plastering and plumbing:* Pollock Bros. *Copper roofing:* Tattersalls. *Joinery:* Geo. Parker & Co. *Architectural metalwork:* J. Starkie Gardner Ltd. *Fascia lettering and nameplates:* 'Sign "O" Times.' *External mineralite rendering:* W. Miller (Plasterers) Ltd. *Semi-sprung dance floor:* Bennetts Flooring Ltd. *External pavings:* Frazzi Ltd. *Aluminium cladding:* Robertson Thain Ltd. *Slate facings:* E. F. Williams Ltd. *Brick suppliers:* Pratt (Watford) Ltd.

Harlow—The Painted Lady Public House. *Architect:* Frederick Gibberd. *Sub-contractors: Facing bricks:* Pratt (Watford) Ltd. *Plumbing:* Matthew Hall & Co. *Faience:* Hathernware Ltd. *Terrazzo:* Art Pavements & Decorations Ltd. *Asphalte tanking:* Durable Asphalte Co. *Wood windows:* Velux Co. *Heating and ventilation:* Earley & Noon Heating Co. *Crate hoist and service lift:* Aldous & Campbell Ltd. *Felt roofing:* Permanite Ltd. *Tiling:* Parkinsons (Wall Tiling) Ltd. *Glazing:* F. Bowman Glassworks Ltd. *Metal windows:* C. E. Welstead Ltd. *Slate slabs:* Westmorland Green Slate Quarries Ltd. *Kitchen equipment:* Summerlings Ltd. *Joinery:* Geo. Parker (Joinery) Ltd. *Balustrading:* S. W. Farmer & Son Ltd. *Electrical installation:* Escott Bros. Ltd. *Sanitary fittings:* B. Finch Ltd. *Thermoplastic tiling:* Marley Tile Co. *Artificial stone:* Cooper Wettern & Co. *Portland stone:* W. & C. French Ltd. *Fibrous plaster ceiling:* David Esdaile & Co. *Ironmongery:* James Gibbons Ltd. *Bar fitting:* W. H. Heath Ltd. *Emulsion paints:* Smith & Walton Ltd. *Oil paint:* I.C.I. Ltd. *Shutter grilles:* Rely-a-bell Burglar & Fire Alarms Co. *External signs:* Radiant Signs (London) Ltd.

Caledonian Hotel, Edinburgh. *General contractor:* Robert Hastie. *Sub-contractors: Curtain material:* Conran Fabrics Ltd. *Curtain making and carpet laying:* R. Frost & Son. *Carpeting:* The Carpet Manufacturing Co. *Furniture:* L.M. Furniture Ltd. *Wallpapers:* Lightbrown Aspinal Ltd. *Decorating:* Holland & Hannen & Cubitts Ltd.; Thomas Bonnar & Son. *Light fittings (lounge):* Robert White & Son; *(dining room):* Contract Metal. *Mirrors:* City Glass Company. *Designers:* Nicholson Bros.

Offices at Becton. *Architect:* Elie Mayorcas. *General contractor:* Peter Lind & Co. *Sub-contractors: Reinforced concrete works, including foundation, control room and superstructure:* Peter Lind & Co. *Curtain walling, patent glazing, glazed metal screens, windows and doors:* Williams & Williams. *Curtain wall infill panels:* Plyglass Ltd. *Ceiling panels:* Frenger Ceilings Ltd. *Heating, ventilating, hot and cold water supply, steam services:* J. Jeffreys & Co. *Electrical installation:* Barlow & Young Ltd. *Passenger and goods lifts:* Etchells, Congdon & Muir Ltd. *Insulation board ceilings:* The Sundeala Board Co. *Faience cladding:* Shaw's Glazed Brick Co. *Marble terrazzo:* Zanelli (London) Ltd. *Bituminous roofing, aluminium decking and wall cladding:* D. Anderson & Son Ltd. *Metal balustrading, etc.:* Light Steelwork (1925) Ltd. *Steel superstructure to plenum and tank room:* R. W. Sharman Ltd. *Demountable partitions:* British Werno Ltd. *Servery counter:* Gardiner & Gulland Ltd. *Roller shutters:* Shutter Contractors Ltd. *'Kelvinator' cold room:* Asquith & Co. (Refrigeration) Ltd. *Wall and floor tiling:* Allan & Cairns (Tilers) Ltd. *Waterproof membrane and tarmacadam to Pay Terrace:* Macartney Ltd. *Plastic tile flooring:* Armstrong Cork Co., Ltd. *Venetian blinds:* J. Avery & Co. *Sanitary fittings:* Stitson's Sanitary Fittings Ltd. *Strong room ventilators:* Chubb & Son's Lock & Safe Co. *Strong room door:* Ratner Safe Co. *Precast terrazzo W.C. partitions:* The Standard Pavements Co. *Potato peeling machine:* Sumerling & Co. *Gas fired incinerators:* William Sugg & Co. *Cooking equipment:* Gardiner & Gulland Ltd. *Ironmongery:* Lockerbie & Wilkinson (B'ham) Ltd. *Paints:* I.C.I. Ltd.; Graphite Products Ltd. *Furniture:* Conran Furniture; Hille of London. *Precast concrete external pavings:* Mono Concrete Co.

School at Wadebridge. *Architect:* F. Kenneth Hicklin. *General contractor:* Richard Costain Ltd. *Sub-contractors: Heating:* Johnson & Baxter (Plymouth) Ltd. *Electric:* W. G. Heath & Co. *Metal windows:* Williams & Williams Ltd. *Felt roofing:* William Briggs & Sons Ltd. *Steelwork:* J. H. Slade Ltd. *Reinforced concrete:* B.R.C. & Engineering Co. *Flooring:* The Granwood Flooring Co.; The South Western Flooring Co.; Jewsons Ltd. *Paved areas:* Selleck Nicholls & Co.

House at Newstead Abbey. *Architects:* Bartlett & Gray. *General contractor:* M. D. Sweeney & Palmer Ltd. *Sub-contractors: Asphalt tanking:* Nottingham Rock & Asphalte Co. *Concrete reinforcement:* B.R.C. Engineering Co. *Plumbing and electrical installation:* F. G. Skerritt Ltd. *Heating installation:* G. N. Haden & Sons Ltd. *Fibrous plaster beam casings:* F. J. Mann & Co. *Wood block flooring:* Hollis Bros. *Linoleum flooring:* Taylor's (Nottingham) Ltd. *Paropa roofing:* Frazzi Ltd. *Stone fireplace:* Gregory Quarries Ltd. *Ironmongery:* Dryad Metalworks Ltd. *Stone paving:* Joe Shaw & Sons.

Sailing Club at Beadnell. *Architects:* Ryder & Yates. *General contractors:* Thomas B. Gregory & Son. *Sub-contractors: Bricks:* Edenhall Concrete Products Ltd. *Roofing:* D. Anderson & Son. *Hardware:* Dryad Metal Works Ltd. *Sanitary ware:* Adamsez Ltd.

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